EB1-22

Original Proposal

IEBC: [A] 104.2.1, [A] 115.5, SECTION 202; IBC: [A] 116.5; IFC: [A] 114.6; IPMC: 111.9

Proponents: Gwenyth R. Searer, Wiss, Janney, Elstner Associates, Inc., myself (gsearer@wje.com)

2021 International Existing Building Code

Revise as follows:

[A] 104.2.1 Determination of substantially improved or substantially damaged existing buildings and structures in flood hazard areas. For applications for reconstruction, ~~rehabilitation,~~ repair, *alteration*, *addition* or other improvement of *existing buildings* or structures located in *flood hazard areas*, the building official shall determine where the proposed work constitutes *substantial improvement* or *repair* of *substantial damage*. Where the building official determines that the proposed work constitutes *substantial improvement* or *repair* of *substantial damage*, and where required by this code, the building official shall require the building to meet the requirements of Section 1612 of the International Building Code, or Section R322 of the International Residential Code, as applicable.

[A] 115.5 Restoration or abatement. The structure or equipment determined to be *unsafe* by the *code official* is permitted to be restored to a safe condition. The owner, the owner's authorized agent, operator or occupant of a structure, premises or equipment deemed *unsafe* by the *code official* shall abate or cause to be abated or corrected such *unsafe* conditions either by *repair*, ~~rehabilitation~~ alteration, demolition or other *approved* corrective action. To the extent that *repairs*, *alterations* or *additions* are made, or a *change of occupancy* occurs during the restoration of the structure, such *repairs*, *alterations*, *additions* or *change of occupancy* shall comply with the requirements of this code.

Delete without substitution:

~~**REHABILITATION.** Any work, as described by the categories of work defined herein, undertaken in an *existing building.*~~

Reason: This is an editorial change dealing with the term "rehabilitation".
Although one of the IEBC provisions affected by the change (i.e., dealing with restoration or abatement in the administrative portion of the code) is mirrored in the IBC, the IFC, and the IPMC, the only code where the term *rehabilitation* is actually defined is the IEBC. As such, it is important to understand how the IEBC treats various terms.

- The term *repair* is defined in Chapter 2 of the IEBC as "The reconstruction, replacement, or renewal of any part of an *existing building* for the purposes of its maintenance or to correct damage."
- The term *addition* is defined in Chapter 2 of the IEBC as "An extension or increase in floor area, number of stories, or height of a building or structure."
- The term *alteration* is defined in Chapter 2 of the IEBC as "Any construction or renovation to an *existing structure* other than a *repair* or an *addition*."

The IEBC goes to some effort to keep the possible categories of actions regarding modification of existing buildings simple: actions are either *repairs*, *additions*, or *alterations*. Period.

The term *rehabilitation*, on the other hand, is defined in Chapter 2 as "Any work, as described by the categories defined herein, undertaken in an *existing building*." Put another way, it means any permitted work to an existing building. Yet there are only three sections of the IEBC that actually use the term: Sections 104.2.1, 115.5, and 405.2.4.

The issues with the use of the word *rehabilitation* in Section 405.2.4 are structural in nature and are dealt with in a separate, independent proposal that does not rely on the outcome of this proposal.

This proposal only deals with Sections 104.2.1 and 115.5 in the IEBC.

- Section 104.2.1 talks about determining whether work on a building constitutes either *substantial improvement* or *repair* of *substantial damage*, so initially it might seem to make sense to include the word "rehabilitation" in this provision. A closer look, however, makes it clear that the term rehabilitation is superfluous in this provision. This section already specifically lists *repairs*, *alterations*, and *additions* as well as a catch-all "other improvement". Furthermore, the term *rehabilitation* is not included in definitions of either

substantial improvement or *repair* of *substantial damage*, So *rehabilitation* is an extraneous term that is not needed in this section.

- Section 115.5 deals with restoration or abatement of *unsafe* conditions. At first blush, use of the term *rehabilitation* might almost seem to make sense here, but again a closer look makes it clear that the term is superfluous. The sentence that contains the term *rehabilitation* mentions *repairs*, demolition, and a catch-all "other approved *corrective* action". Rather than having two catch-all terms, it would be better to replace *rehabilitation* with a more specific term that makes more sense in the context of making a change: *alteration*. As a reminder, *alteration* is defined as "Any construction or renovation to an *existing structure* other than a *repair* or an *addition*." So the word *alteration* is more fitting in this section than *rehabilitation*.

Given that the term *rehabilitation* is specifically, and somewhat illogically. defined in the IEBC as an all-inclusive term covering all possible actions on a building, given that the definition is counter to the ordinarily accepted meaning of "rehabilitation," and given that the term is barely used in the IEBC (and in a superfluous, duplicative, and arguably confusing manner), it makes sense to delete the term from the definitions in Section 202 of the IEBC.

Since Section 115.5 in the IEBC is mirrored exactly in the IBC (Section 116.5), in the IFC (Section 114.6), and in the IPMC (Section 111.9), it makes sense to make the same changes to these sections (i.e., replace *rehabilitation* with the term *alteration*) to maintain consistency between the various codes and because an alteration is what you are doing if you are not repairing.

Although the term "rehabilitation" occurs in a few other locations in those four other codes, it was never defined in those codes, and it makes more sense to use the ordinarily accepted meaning of "rehabilitation" in these instances (e.g.., returning something to a good condition -- Cambridge Dictionary), so deletion of the definition from the IEBC makes more sense here as well..

Note that the IMC, the IPC, the IFGC, and the ISPSC contain their own similar but not identical set of provisions and generally use the term "rehabilitate" in its ordinarily accepted meaning; however, those provisions are not identical to the IEBC provisions, so are not proposed for modification herein.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
This is an editorial change that merely removes the word "rehabilitation" from the IEBC because that word is superfluous and its intent and meaning are already captured in the other portions of the provisions proposed for modification. Since four other codes copy the wording in the IEBC about how to deal with unsafe conditions, these codes are also proposed for modification to match what is being proposed in the IEBC.

Deletion or replacement of the word will have zero impact on the scope of these codes or how they address unsafe conditions; consequently, this proposal has zero impact on the cost of construction.

Public Hearing Results

Committee Action **As Submitted**

Committee Reason: This proposal was approved based upon the reason statement and the fact that the term "rehabilitation" is an umbrella term that is not necessary. The term is not used within the technical portions of the code. (Vote: 9-5)

Final Hearing Results

EB1-22 AS

EB2-22

Original Proposal

IEBC: SECTION 202; IBC: SECTION 202

Proponents: Gwenyth R. Searer, Wiss, Janney, Elstner Associates, Inc., myself (gsearer@wje.com)

THIS CODE CHANGE WILL BE HEARD BY THE IBC-STRUCTURAL CODE COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THAT COMMITTEE.

2021 International Existing Building Code

Revise as follows:

[BS] DANGEROUS. Any building, structure or portion thereof that meets any of the conditions described below shall be deemed dangerous:

1. The building or structure has collapsed, has partially collapsed, has moved off its foundation or lacks the necessary support of the ground.

2. There exists a significant risk of collapse, detachment or dislodgement of any portion, member, appurtenance or ornamentation of the building or structure under permanent, routine or frequent loads; under actual loads already in effect; or under snow, wind, rain, flood, earthquake aftershock, or other environmental loads when such loads are imminent.

Reason: This is a change that was suggested back in 2019 during the development of the existing language; however, it was never formally proposed to the Structural Committee. Since the current language was adopted, a question has been raised about whether earthquake loads should be considered "imminent" if, say, a region of the country is "due" for an earthquake. That is not the intent of this definition.

Earthquakes that occur with recurrence intervals of hundreds to thousands of years (e.g., design-level events) are not and should not be considered "imminent". We lack the technology to predict when such large, essentially random events are likely to occur. We do know, however, that after a large earthquake, aftershocks are likely to occur, with the vast majority of aftershocks happening within hours to a few days of the initial earthquake. These are the earthquakes that can and should be considered "imminent". If a significant earthquake occurs, the aftershocks that are likely to occur soon thereafter are rightly considered "imminent." So if a building is damaged due to an earthquake, the building should be considered "dangerous" if there is a significant risk of collapse due to an earthquake aftershock that may occur in the coming hours to days.

This proposal clarifies the intent regarding earthquakes that should be considered, and brings the language regarding earthquakes into alignment with the other loads that are intended to be "imminent". Examples include snow loads when a winter storm is approaching, wind loads from an approaching storm, rain loads due to an approaching rainstorm, and flood loads when a flood is expected due to an approaching rainstorm or hurricane,

Cost Impact: The code change proposal will not increase or decrease the cost of construction

This is an editorial clarification of the intent; the proposal is not intended to change the existing scope of the term "dangerous".

Public Hearing Results

Committee Action **As Submitted**

THIS CODE CHANGE WAS HEARD BY THE IBC-STRUCTURAL COMMITTEE.

Committee Reason: Approved based on the reason statement provided and that adding the word 'aftershock' after 'earthquake' provided

needed clarification. (Vote: 12-2)

Final Hearing Results	
EB2-22	AS

EB3-22

Original Proposal

IEBC: SECTION 202

Proponents: Gwenyth R. Searer, Wiss, Janney, Elstner Associates, Inc., myself (gsearer@wje.com)

THIS CODE CHANGE WILL BE HEARD BY THE IBC-STRUCTURAL CODE COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THAT COMMITTEE.

2021 International Existing Building Code

Revise as follows:

[BS] DISPROPORTIONATE EARTHQUAKE DAMAGE. A condition of earthquake-related damage where both of the following occur:

1. The 0.3-second spectral acceleration at the building site for the earthquake in question, as estimated by the most recent algorithm of the United States Geological Survey for the point closest to the site or as determined from seismograph records from the site or from locations closer to the site than the algorithm-provided data points, ~~for the earthquake in question~~ is less than 40 percent of the mapped acceleration parameter S_S.

2. The vertical elements of the lateral force-resisting system have suffered damage such that the lateral load-carrying capacity of any story in any horizontal direction has been reduced by more than 10 percent from its predamage condition.

Reason: Now that this upgrade trigger has been in the code for a cycle, it has been tested during recent earthquakes. A number of issues have been identified, including the following:

1. The United States Geological Survey (USGS) publishes spectral acceleration estimates that are generated by the USGS as well as estimates that are generated by regional entities that are not required to adhere to the most recent and up-to-date USGS algorithm.
2. The USGS algorithm is modified over time, and some of the regional entities that publish the estimates of spectral acceleration do not in fact use the most recent and up-to-date algorithm provided by the USGS.
3. The estimates of spectral acceleration for a given earthquake change over time as more and more data becomes available and is processed and aggregated.
4. In some cases, the data aggregated by the USGS may not include all seismographs that are close to the building site. For example, some buildings have seismographs on site, but the data from those seismographs may be owned by the property owner and is often not available to the USGS. In these cases, the USGS-based estimates (which combine both quantitative data from seismographs and qualitative/subjective results from Did You Feel It? surveys of lay people) may be dramatically different than what was actually recorded at or very close to the site.
5. The USGS has indicated that interpolation between their published grid points introduces additional uncertainties and is therefore not recommended. They recommend instead to use the data point closest to the site.

This proposal attempts to address Issues 1, 2, 4, and 5 by clarifying that it is the algorithm that is provided by the USGS that should be used, clarifying that the most recent version of the algorithm should be used, clarifying that the grid point closest to the site that should be used, and requiring that data from actual seismographs get preference when the seismographs are closer than the nearest USGS data grid point.

These are all commonsense changes that will improve the accuracy of determining whether or not a specific building has experienced disproportionate earthquake damage.

Note that Issue 3 is not addressed here, as we hope it is clear to all building officials and engineers that the most up-to-date estimates should be used as opposed to superseded results.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
This proposal will alter the cost to comply with the disproportionate earthquake damage trigger. In some cases, this proposal may increase the cost of construction (e.g., where using less accurate estimates from a superseded algorithm -- or ignoring data from an on-site

seismograph -- would have indicated that the earthquake had greater damage potential at the site than it actually had). This proposal could also decrease the cost of construction (e.g., where using less accurate estimates from a superseded algorithm -- or ignoring data from an on-site seismograph -- would have indicated that the earthquake had less damage potential at the site than it actually had). And it may result in larger or smaller construction costs on a building-by-building basis for the same earthquake, depending on the shaking that actually occurred at the site versus the estimates mandated by the currently existing language. For many if not most buildings, however, it won't make a difference at all, which is why the cost option "will not increase or decrease" is selected above.

Public Hearing Results

Committee Action **Disapproved**

THIS CODE CHANGE WAS HEARD BY THE IBC-STRUCTURAL COMMITTEE.

Committee Reason: Disapproved based on concerns with the proposed wording since as phrased any close seismograph record could be utilized even if that record was not justified. The committee emphasized that the existing wording provided a clear direction. (Vote: 9-5)

Public Comments

Public Comment 1

Proponents: Gwenyth R. Searer, Wiss, Janney, Elstner Associates, Inc., myself (gsearer@wje.com) requests As Modified by Public Comment

Modify as follows:

2021 International Existing Building Code

[BS] DISPROPORTIONATE EARTHQUAKE DAMAGE. A condition of earthquake-related damage where both of the following occur:

1. The 0.3-second spectral acceleration at the building site for the earthquake in question, as estimated by one of the following, is less than 40 percent of the mapped acceleration parameter S_s:
   1.1. The ~~the most recent algorithm of the~~ United States Geological ~~Survey~~ Survey's algorithm for the data point closest to the site. ~~or~~
   1.2. As~~as~~ determined from peer-reviewed seismograph records from the site or from locations closer to the site than the algorithm-provided data points~~., is less than 40 percent of the mapped acceleration parameter S_s~~.
2. The vertical elements of the lateral force-resisting system have suffered damage such that the lateral load-carrying capacity of any story in any horizontal direction has been reduced by more than 10 percent from its predamage condition.

Commenter's Reason: Although the Committee appeared to be supportive of this proposal, and although no one testified against the proposal, the Committee and people who provided testimony requested several changes:
1. Make the various components of Item 1 into a list, which I have done.

2. For Item 1.2 make it clear that the data must be peer-reviewed in some fashion so that the data cannot be from an iPhone or other ad-hoc recording, which I have done by adding the words "peer-reviewed" to the words "seismograph records".

3. For Item 1.1 make it clear to use the USGS's algorithm map and data but not say "the most recent version". Although I have complied with the request to delete "the most recent version" from the proposal, the USGS revises its algorithms and its data over time, which means that the maps change over time. I must point out that this is an issue that neither the original proposal nor this public comment created. Although the maps largely stabilize as less and less incremental data is added, and changes are less and less significant; the maps do change over time -- this is a problem inherent in using the USGS data that was already a problem with the existing trigger.

4. I moved the language associated with the mapped acceleration parameter S_s before items 1.1 and 1.2 to ensure that the language applies to both items.

I have made all of the changes requested, and given that the Committee was supportive of the concept but first wanted to see these changes, I respectfully ask that the Assembly vote to approve this proposal as modified by this public comment. Thank you.

Cost Impact: The net effect of the Public Comment and code change proposal will not increase or decrease the cost of construction
As stated in the original proposal, the purpose of this proposal (and public comment) is to make the determination as to whether or not a building experienced disproportionate earthquake damage more accurate. Consequently, this may increase the costs of repair for some buildings and decrease the costs for others. For most buildings, the costs will remain the same, which is why I selected "not increase or decrease".

Final Hearing Results

EB3-22 AMPC1

EB4-22

Original Proposal

IEBC: SECTION 202

Proponents: Gwenyth R. Searer, Wiss, Janney, Elstner Associates, Inc., myself (gsearer@wje.com)

THIS CODE CHANGE WILL BE HEARD BY THE IBC-STRUCTURAL CODE COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THAT COMMITTEE.

2021 International Existing Building Code

Revise as follows:

[BS] DISPROPORTIONATE EARTHQUAKE DAMAGE. A condition of earthquake-related damage where both of the following occur:

1. The 0.3-second spectral acceleration at the building site as estimated by the United States Geological Survey for the earthquake in question is less than 40 percent of the mapped acceleration parameter S_S.

2. The vertical elements of the lateral force-resisting system have suffered damage such that the lateral load-carrying capacity of any story in any horizontal direction has been reduced by more than ~~10~~ 15 percent from its ~~predamage~~ pre-earthquake condition.

Reason: Now that this upgrade trigger has been in the code for a cycle, it has been tested during recent earthquakes, and it needs improvement.
This proposal does two things:

1. It limits damage that counts towards the trigger to that damage actually caused by the earthquake in question. This change is required since the provision is meant to define damage that is "disproportionate" relative to the intensity of the earthquake shaking just experienced. Damage from other causes should not be considered in a trigger that is solely to address disproportionate damage. Damage from things like differential settlement, corrosion of steel, wood decay, vehicle impact, fire, or other environmental loads that are not earthquake-related should play no part in determining whether earthquake damage was disproportionate compared to expectations.
2. It increases the triggering damage threshold to 15 percent. A 10-percent threshold is far too low to have engineering significance. As a reminder, the IEBC considers 10-percent changes in seismic demand-to-capacity ratio to be negligible for additions or alterations (which are deliberate actions, and the effects of which are relatively easy to calculate), as seen in Exception 1 to Section 502.5 (additions), Exceptions 1 and 2 to Section 503.4 (alterations), the exception to Section 805.3, and Exception 2 to Section 1103.2. In all of these cases, an increase in demand-to-capacity of 10 percent is not considered significant. Since we design and expect nearly all structures to experience architectural and structural damage during a design-level earthquake, a 10-percent damage threshold for earthquakes that are 40 percent of the design-level earthquake is not appropriate and is too low. A 15-percent trigger is proposed, since it is about half of the similar threshold for *substantial structural damage*.

For these reasons, I request that damage that is not related to earthquake be excluded from the disproportionate damage trigger, and that the trigger be increased to a threshold substantially greater than 10 percent.

Cost Impact: The code change proposal will decrease the cost of construction
Making the trigger more targeted and increasing the threshold will result in fewer building for which upgrade is mandated and therefore smaller repair costs after earthquakes.

Public Hearing Results

Committee Action **As Modified**

THIS CODE CHANGE WAS HEARD BY THE IBC-STRUCTURAL COMMITTEE.

Committee Modification: [BS] DISPROPORTIONATE EARTHQUAKE DAMAGE. A condition of earthquake-related damage where both of the following occur:

1. The 0.3-second spectral acceleration at the building site as estimated by the United States Geological Survey for the earthquake in question is less than ~~40~~ 30 percent of the mapped acceleration parameter SS.
2. The vertical elements of the lateral force-resisting system have suffered damage such that the lateral load-carrying capacity of any story in any horizontal direction has been reduced by more than ~~15~~ 10 percent from its pre-earthquake condition.

Committee Reason: Approved as modified as the committee noted that 'pre-earthquake' is clearer and more appropriate than 'predamaged'. The modification lessens the second trigger back to the current code value. (Vote: 10-4)

Final Hearing Results

EB4-22 AM

EB6-22

Original Proposal

IEBC: SECTION 202

Proponents: Zeno Martin, representing myself (zmartin@wje.com)

THIS CODE CHANGE WILL BE HEARD BY THE IBC-STRUCTURAL CODE COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THAT COMMITTEE.

2021 International Existing Building Code

Revise as follows:

[BS] SUBSTANTIAL STRUCTURAL DAMAGE. A condition where any of the following apply:

1. The vertical elements of the lateral force-resisting system have suffered damage such that the lateral load-carrying capacity of any story in any horizontal direction has been reduced by more than 33 percent from its predamage condition. Removal of structurally undamaged components for the purposes of implementing repair shall not be considered damage that reduces load carrying capacity.

2. The capacity of any vertical component carrying gravity load, or any group of such components, that has a tributary area more than 30 percent of the total area of the structure's floor(s) and roof(s) has been reduced more than 20 percent from its predamage condition, and the remaining capacity of such affected elements, with respect to all dead and live loads, is less than 75 percent of that required by the *International Building Code* for new buildings of similar structure, purpose and location.Removal of structurally undamaged components for the purposes of implementing repair shall not be considered damage that reduces load carrying capacity.

3. The capacity of any structural component carrying snow load, or any group of such components, that supports more than 30 percent of the roof area of similar construction has been reduced more than 20 percent from its predamage condition, and the remaining capacity with respect to dead, live and snow loads is less than 75 percent of that required by the *International Building Code* for new buildings of similar structure, purpose and location.Removal of structurally undamaged components for the purposes of implementing repair shall not be considered damage that reduces load carrying capacity.

Reason: Remediation contractors are sometimes excessive in removal of existing materials in their initial effort to mitigate and/or initiate repair. In addition, sometimes undamaged elements must be removed in order to access damaged components. The definition as written is open to interpretation where excessive or voluntary demolition done only for the purpose of making repairs leads to the conclusion that capacity has been reduced and should be considered in the calculation as to whether substantial structural damage has occurred. This can lead to the perception that a contractor's repair work exceeds the substantial structural damage threshold.

Cost Impact: The code change proposal will decrease the cost of construction
This proposal will reduce the cost of repairs by clarifying that related work does not itself create damage for which further expensive evaluation and possible upgrade are triggered.

Public Hearing Results

Committee Action **As Modified**

THIS CODE CHANGE WAS HEARD BY THE IBC-STRUCTURAL COMMITTEE.

Committee Modification: [BS] SUBSTANTIAL STRUCTURAL DAMAGE. A condition where any of the following apply:

1. The vertical elements of the lateral force-resisting system have suffered damage such that the lateral load-carrying capacity of any story in any horizontal direction has been reduced by more than 33 percent from its predamage condition. ~~Removal of structurally undamaged components for the purposes of implementing repair shall not be considered damage that reduces load carrying capacity.~~

2. The capacity of any vertical component carrying gravity load, or any group of such components, that has a tributary area more than 30 percent of the total area of the structure's floor(s) and roof(s) has been reduced more than 20 percent from its predamage condition, and the remaining capacity of such affected elements, with respect to all dead and live loads, is less than 75 percent of that required by the *International Building Code* for new buildings of similar structure, purpose and location.~~Removal of structurally undamaged components for the purposes of implementing repair shall not be considered damage that reduces load carrying capacity.~~

3. The capacity of any structural component carrying snow load, or any group of such components, that supports more than 30 percent of the roof area of similar construction has been reduced more than 20 percent from its predamage condition, and the remaining capacity with respect to dead, live and snow loads is less than 75 percent of that required by the International Building Code for new buildings of similar structure, purpose and location. ~~Removal of structurally undamaged components for the purposes of implementing repair shall not be considered damage that reduces load carrying capacity.~~

For purposes of this definition, work done to implement repairs shall not be considered damage that reduces structural capacity.

Committee Reason: Approved as modified per the reason statement. The modification clarifies the intent of the definition by providing a single sentence clarifying that work associated with a repair shall not be considered part of the damage when determining structural capacity. (Vote: 14-0)

Final Hearing Results

EB6-22 AM

EB12-22

Original Proposal

IEBC: SECTION 202 (New), SECTION 303, 303.1, 303.1.1 (New), 303.2 (New), 303.2.1 (New), 303.2.2 (New), 303.2, 303.2.1, 303.2.2

Proponents: Mike Nugent, Chair, Building Code Action Committee (bcac@iccsafe.org); Marc Levitan, ICC 500 Storm Shelter Standard Development Committee (icc500@iccsafe.org)

2021 International Existing Building Code

Add new definition as follows:

STORM SHELTER.
A building, structure or portions thereof, constructed in accordance with ICC 500, designated for use during hurricanes, tornadoes or other severe windstorms.

SECTION 303
STORM SHELTERS

Revise as follows:

303.1 ~~Storm shelters~~ General. This section applies to the design and construction of storm shelters ~~constructed as rooms or spaces within *existing buildings*~~ for the purpose of providing protection during~~storms that produce high winds, such as~~ tornados~~,~~ ~~and~~ hurricanes and other severe windstorms. Section 303.2 provides requirements for the evaluation, maintenance and repair of existing storm shelters. Section 303.3 specifies where storm shelters are required for additions to existing buildings. ~~Such structures shall be designated to be hurricane shelters, tornado shelters, or combined hurricane and tornado shelters. Such structures shall be constructed in accordance with this code and ICC 500.~~

Add new text as follows:

303.1.1 Construction. Storm shelters shall be constructed in accordance with Section 423 of the International Building Code and ICC 500 and shall be designated as hurricane shelters, tornado shelters, or combined hurricane and tornado shelters.

Exception: Storm shelters added to critical emergency operations facilities or Group E occupancies are not required to comply with the travel distance in Section 423.4.2 or 423.5.2 of the International Building Code.

303.2 Evaluation, maintenance and repairs. Community storm shelters shall be evaluated, maintained and repaired in accordance with this section and ICC 500.

303.2.1 Evaluation. Community storm shelters shall be evaluated annually, and when requested by the authority having jurisdiction, in accordance with ICC 500.

303.2.2 Maintenance and Repairs. Community storm shelters shall be maintained in an operable condition. All structural and operational element shall be repaired or replaced in accordance with ICC 500 where damaged or found to be inoperable.

Revise as follows:

303.3 ~~303.2~~ Addition to a Group E occupancy. Where an *addition* is added to an existing Group E occupancy located in an area where the shelter design wind speed for tornados is 250 mph (402.3 km/h) in accordance with Figure 304.2(1) of ICC 500 and the occupant load in the *addition* is 50 or more, the *addition* shall have a storm shelter constructed in accordance with ICC 500.

Exceptions:

1. Group E day care *facilities*.
2. Group E occupancies accessory to places of religious worship.
3. *Additions* meeting the requirements for shelter design in ICC 500.

303.3.1 ~~303.2.1 Required~~ Design occupant capacity. The required design occupant capacity of the storm shelter shall include all buildings on the site, and shall be the total occupant load of the classrooms, vocational rooms and offices in the Group E occupancy.

Exceptions:

1. Where an addition is being added on an existing Group E site, and where the addition is not of sufficient size to accommodate the required design occupant capacity of the storm shelter for all of the buildings on-site, the storm shelter shall at a minimum accommodate the required capacity for the addition.
2. Where approved by the code official, the requireddesign occupant capacity of the shelter shall be permitted to be reduced by the design occupant capacity of any existing storm shelters on the site.

303.4 ~~303.2.2~~ Occupancy classification. The occupancy classification for storm shelters shall be determined in accordance with Section 423.3 of the *International Building Code*.

Reason: The intent of this proposal is to coordinate with the changes to the storm shelter requirements in IBC (G94-21 AS, G95-21 AM, G96-21 AM and G97-21 AM) and the latest edition of the storm shelter standard (ICC 500).Section 303.1 – The first sentence in the charging paragraph is proposed to match the phrase for the types of storms used in the ICC 500. The 2nd and 3rd sentences are the pointers for the sections on maintenance and additions. The deleted sentence is moved to a new section 303.1.1 for clarity and to allow for the exception for travel distance (added to shelters for critical emergency operations facilities by G95-21 AM, and in the current text for Educational facilities). In an existing site, the storm shelter may be part of a new building on the site and could not always meet the maximum exterior travel distances. It is important to get the shelter, and the extra travel time involved can be addressed in the operations plans.

Section 303.2 –The 2020 edition of ICC 500, which was incorporated by reference in the 2021 I-Codes, contains new provisions for the evaluation, maintenance, and repair of community storm shelters. The storm shelter owner or their authorized agent is required to have the shelter evaluated annually, and when requested by the authority having jurisdiction, to identify whether shelter envelope walls or roofs are damaged or whether any impact-protective systems (including doors, windows and shutters) are damaged or are not operational. Any shelter envelope wall, roof or impact-protective system found to be damaged or not operational is required to be repaired or replaced in accordance with Section 113 of ICC 500-2020. The ICC 500 provisions read as follows:

SECTION 113
EVALUATION, MAINTENANCE AND REPAIRS

113.1 General. Community shelters shall be evaluated and maintained in accordance with Sections 113.2 through 113.4.

113.2 Evaluation. The owner or owner's authorized agent shall evaluate the storm shelter annually and when requested by the authority having jurisdiction. The evaluation of the storm shelter shall include the following:

1. The storm shelter envelope shall be evaluated through visual observation to assess whether the walls and roofs are intact and undamaged.
2. Impact-protective systems shall be evaluated for compliance with the manufacturer's operational and maintenance requirements.113.3 Maintenance and repairs. Storm shelters shall be maintained in an operable condition at all times. All structural and operational elements shall be repaired or replaced where damaged or found to be inoperable.

113.3.1 Damaged or missing components. Storm shelters shall be maintained so that walls and roofs are intact and undamaged. Any damage to the storm shelter or its impact-protective systems that impair its functionality shall be repaired or replaced. Damaged or missing components shall be replaced with components that are specified within the tested or listed assembly.

113.3.2 Replacement assemblies and systems. Where it is necessary to replace certified or listed impact-protective systems, replacements shall comply with applicable ICC 500 requirements and shall be tested and installed as required by this standard for new

installations or construction.

113.4 Recordkeeping. A record of the evaluations shall be maintained by the owner or owner's authorized agent. A record of the evaluations and any other tests, repairs or replacements and other operations and maintenance shall be kept on the premises or other approved location and consist of all changes to the original storm shelter envelope or impact-protective systems. Records shall include the date and person conducting the evaluations and maintenance or repairs. The proposed IEBC storm shelter provisions trigger evaluations of community storm shelters to verify that they can continue protecting occupants from extreme wind events. Door assemblies in multi-use storm shelters are especially vulnerable to disrepair when used frequently for their 'normal use' functions (e.g., gym, classroom, auditorium). Observations of existing storm shelter door assemblies have revealed the following common maintenance issues that can result in operational failure during an extreme wind event: debris in floor latch points preventing full connection, rust, and malfunctioning hardware. The new ICC 500 provision is specific to community storm shelters. Residential storm shelters are excluded so as not to burden homeowners who choose to incorporate a small residential storm shelter into their home or provide one in their yard.

Section 303.3 – Adding 'design' matches the terms used in the 2020 ICC 500 and the approved changes to 2024 IBC(G94-21 AM) and 2024 IPMC (PM11-20).

This proposal is submitted by the ICC Building Code Action Committee (BCAC) and the ICC 500 Committee, Standard for the Design and Construction of Storm Shelters.

BCAC was established by the ICC Board of Directors in July 2011 to pursue opportunities to improve and enhance assigned International Codes or portions thereof. In 2020 and 2021 the BCAC has held several virtual meetings open to any interested party. In addition, there were numerous virtual Working Group meetings for the current code development cycle, which included members of the committee as well as interested parties. Related documents and reports are posted on the BCAC website at https://www.iccsafe.org/products-and-services/i-codes/code-development/cs/building-code-action-committee-bcac/.

The ICC 500 (Standard for the Design and Construction of Storm Shelters) development committee has held several virtual meetings during the to develop the 2020 edition. In addition, there were numerous virtual Working Group meetings. All meetings included members of the committee as well as interested parties. The committee has now moved to continuous maintenance. Related documents and reports are posted on the ICC 500 website at https://www.iccsafe.org/products-and-services/standards-development/is-stm/ .

Cost Impact: The code change proposal will increase the cost of construction

The cost increase would be for the time and labor of the owner (or their agent) to conduct the annual visual inspection and/or hire an engineer or architect if needed for a more detailed evaluation. There would also be a cost to repair a damaged roof or wall or to replace a damaged component for an impact-protective system or the entire system if deemed necessary, but this is essential to the continued safe use of the shelter.

Public Hearing Results

Committee Action **As Modified**

Committee Modification:

303.1 General. This section applies to the design and construction of storm shelters for the purpose of providing protection during tornados, hurricanes and other severe windstorms. ~~Section 303.2 provides requirements for the evaluation, maintenance and repair of existing storm shelters. Section 303.3 specifies where storm shelters are required for additions to existing buildings.~~

303.2 ~~Evaluation, maintenance and repairs.~~ Community storm shelters shall be evaluated, maintained and repaired in accordance with this section and ICC 500.

~~**303.2.1 Evaluation.** Community storm shelters shall be evaluated annually, and when requested by the authority having jurisdiction, in accordance with ICC 500.~~

~~**303.2.2 Maintenance and Repairs.** Community storm shelters shall be maintained in an operable condition. All structural and operational element shall be repaired or replaced in accordance with ICC 500 where damaged or found to be inoperable.~~

Committee Reason: Approval of this proposal was based upon the need to ensure that new storm shelters are constructed in accordance with ICC 500. This proposal coordinates the requirements for storm shelters with the IBC. The modification simply removes requirements related to maintenance as the IEBC is a construction code. (Vote: 12-2)

Final Hearing Results

EB12-22 AM

EB15-22

Original Proposal

IEBC: [BS] 304.3, [BS] 304.3.1, [BS] TABLE 304.3.1, [BS] 304.3.2, [BS] TABLE 304.3.2, [BS] 405.2.3.1, [BS] 405.2.3.3, [BS] 502.5, [BS] 503.4, [BS] 503.5, [BS] 503.6, [BS] 503.7, [BS] 503.8, [BS] 503.9, [BS] 503.10, [BS] 503.11, 506.5.3, 506.5.4, [BS] 706.3.1, [BS] 805.3, [BS] 906.2, [BS] 906.3, [BS] 906.4, [BS] 906.5, [BS] 906.6, [BS] 906.7, [BS] 1006.3, [BS] 1006.4, [BS] 1103.2

Proponents: David Bonowitz, David Bonowitz, S.E., FEMA-ATC Seismic Code Support Committee (dbonowitz@att.net); Kelly Cobeen, Wiss Janney Elstner Associates, Federal Emergency Management Agency/Applied Technology Council - Seismic Code Support Committee (kcobeen@wje.com); Michael Mahoney, FEMA, FEMA (mike.mahoney@fema.dhs.gov)

THIS CODE CHANGE WILL BE HEARD BY THE IBC-STRUCTURAL CODE COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THAT COMMITTEE.

2021 International Existing Building Code

Revise as follows:

[BS] 304.3 Seismic evaluation and design procedures. Where required, seismic evaluation or design shall ~~be based on~~ comply with the procedures and criteria in this section, regardless of which compliance method is used. The scope of the required evaluation or design shall be as indicated in applicable provisions of Chapters 4 through 12.

[BS] 304.3.1 ~~Compliance with full~~ Full seismic ~~forces~~ criteria. ~~Where compliance requires the use of full seismic forces, the criteria shall be in accordance with one of the following~~ Where required, seismic evaluation or design shall comply with one of the following:

1. ~~One-hundred percent of the values in~~ Section 1613 of the *International Building Code*. Where the existing seismic force-resisting system is a type that can be designated as “Ordinary,” values of R, Ω_0 and C_d used for analysis in accordance with Chapter 16 of the International Building Code shall be those specified for structural systems classified as “Ordinary” in accordance with Table 12.2-1 of ASCE 7, unless it can be demonstrated that the structural system will provide performance equivalent to that of a “Detailed,” “Intermediate” or “Special” system.
2. ASCE 41, using a Tier 3 procedure and the two-level performance objective in Table 304.3.1 for the applicable *risk category*.

[BS] TABLE 304.3.1 PERFORMANCE OBJECTIVES FOR USE IN ASCE 41 FOR COMPLIANCE WITH FULL SEISMIC ~~FORCES~~ CRITERIA

RISK CATEGORY (Based on IBC Table 1604.5)	STRUCTURAL PERFORMANCE LEVEL FOR USE WITH BSE-1N EARTHQUAKE HAZARD LEVEL	STRUCTURAL PERFORMANCE LEVEL FOR USE WITH BSE-2N EARTHQUAKE HAZARD LEVEL
I	Life Safety (S-3)	Collapse Prevention (S-5)
II	Life Safety (S-3)	Collapse Prevention (S-5)
III	Damage Control (S-2)	Limited Safety (S-4)
IV	Immediate Occupancy (S-1)	Life Safety (S-3)

[BS] 304.3.2 ~~Compliance with reduced~~ Reduced seismic ~~forces~~ criteria. ~~Where seismic evaluation and design is permitted to use reduced seismic forces, the criteria used shall be in accordance with one of the following~~ Where required, seismic evaluation or design shall comply with one of the following:

1. ~~The~~ Section 1613 of the *International Building Code* using 75 percent of the prescribed forces. Values of R, Ω_0 and C_d used for analysis shall be as specified in Section 304.3.1 of this code.

2. Applicable chapters of Appendix A of this code, for structures~~Structures~~ or portions of structures ~~that comply with the requirements of the applicable chapter in Appendix A as~~ specified in Items 2.1 through 2.4 ~~and~~ subject to the limitations of the respective chapter ~~Appendix A chapters shall be deemed to comply with this section~~.
   2.1. Chapter A1 for ~~The seismic evaluation and design of~~ unreinforced masonry bearing wall buildings ~~in~~ assigned to *Risk Category* I or II ~~are permitted to be based on the procedures specified in Appendix Chapter A~~1.
   2.2. Chapter A2 for ~~Seismic evaluation and design of~~ the wall anchorage system in reinforced concrete and reinforced masonry wall buildings with flexible diaphragms ~~in~~ assigned to *Risk Category* I or II ~~are permitted to be based on the procedures specified in Chapter A2~~.
   2.3. Chapter A3 for ~~Seismic evaluation and design of~~ cripple walls and sill plate anchorage in residential buildings of light-frame wood construction ~~in~~ assigned to *Risk Category* I or II ~~are permitted to be based on the procedures specified in Chapter A3~~.
   2.4. Chapter A4 for ~~Seismic evaluation and design of~~ soft, weak or open-front wall conditions in multiple-unit residential buildings of wood construction ~~in~~ assigned to *Risk Category* I or II ~~are permitted to be based on the procedures specified in Chapter A4~~.
3. ASCE 41, using the performance objective in Table 304.3.2 for the applicable *risk category*.

[BS] TABLE 304.3.2 PERFORMANCE OBJECTIVES FOR USE IN ASCE 41 FOR COMPLIANCE WITH REDUCED SEISMIC~~FORCES~~ CRITERIA

RISK CATEGORY (Based on IBC Table 1604.5)	STRUCTURAL PERFORMANCE LEVEL FOR USE WITH BSE-1E EARTHQUAKE HAZARD LEVEL	STRUCTURAL PERFORMANCE LEVEL FOR USE WITH BSE-2E EARTHQUAKE HAZARD LEVEL
I	Life Safety (S-3). See Note a	Collapse Prevention (S-5)
II	Life Safety (S-3). See Note a	Collapse Prevention (S-5)
III	Damage Control (S-2). See Note a	Limited Safety (S-4). See Note b
IV	Immediate Occupancy (S-1)	Life Safety (S-3). See Note c

a. For Risk Categories I, II and III, the Tier 1 and Tier 2 procedures need not be considered for the BSE-1E earthquake hazard level.

b. For Risk Category III, the Tier 1 screening checklists shall be based on the Collapse Prevention, except that checklist statements using the Quick Check provisions shall be based on *MS*-factors that are the average of the values for Collapse Prevention and Life Safety.

c. For Risk Category IV, the Tier 1 screening checklists shall be based on Collapse Prevention, except that checklist statements using the Quick Check provisions shall be based on *MS*-factors for Life Safety.

[BS] 405.2.3.1 Evaluation. The building shall be evaluated by a registered design professional, and the evaluation findings shall be submitted to the *code official*. The evaluation shall establish whether the lateral force-resisting system of the damaged building, if repaired to its predamage state, would comply with the provisions of the *International Building Code* for load combinations that include wind ~~or earthquake~~ effects~~, except that the seismic forces shall be the reduced seismic forces~~and with Section 304.3.2 of this code.

[BS] 405.2.3.3 Extent of repair for noncompliant buildings. If the evaluation does not establish that the lateral force-resisting system of the building in its predamage condition complies with the provisions of Section 405.2.3.1, then the~~building~~ lateral force-resisting system shall be retrofitted to comply with the provisions of this section. The wind loads for the *repair* and *retrofit* shall be those required by the building code in effect at the time of original construction, unless the damage was caused by wind, in which case the wind loads shall be in accordance with the *International Building Code*. The seismic retrofit shall comply with Section 304.3.2 of this code, but the earthquake loads ~~for this *retrofit* design~~ shall not be less than those required by the building code in effect at the time of original construction~~, but not less than the reduced seismic forces~~.

[BS] 502.5 Existing structural elements carrying lateral load. Where the *addition* is structurally independent of the *existing structure*, existing lateral load-carrying structural elements shall be permitted to remain unaltered. Where the *addition* is not structurally independent of the *existing structure*, the lateral force-resisting system of the *existing structure* and its *addition* acting together as a single structure shall

~~be shown to meet the requirements of~~ comply with Section~~s~~ 1609 ~~and 1613~~ of the International Building Code ~~using full seismic forces~~ and with Section 304.3.1 of this code.

Exceptions:

1. Any existing lateral load-carrying structural element whose demand-capacity ratio with the *addition* considered is not more than 10 percent greater than its demand-capacity ratio with the *addition* ignored shall be permitted to remain unaltered. For purposes of calculating demand-capacity ratios, the demand shall consider applicable load combinations with design lateral loads or forces in accordance with Section~~s~~ 1609 ~~and 1613~~ of the International Building Code and Section 304.3.1 of this code. For purposes of this exception, comparisons of demand-capacity ratios and calculation of design lateral loads, forces and capacities shall account for the cumulative effects of *additions* and *alterations* since original construction.
2. Buildings of Group R occupancy with not more than five dwelling or sleeping units used solely for residential purposes where the *existing building* and the *addition* together comply with the conventional light-frame construction methods of the *International Building Code* or the provisions of the *International Residential Code*.

[BS] 503.4 Existing structural elements carrying lateral load. Except as permitted by Section 503.13, where the *alteration* increases design lateral loads, results in a prohibited structural irregularity as defined in ASCE 7, or decreases the capacity of any existing lateral load-carrying structural element, the ~~structure~~ lateral force-resisting system of the altered building or structure shall meet the requirements of Section~~s~~ 1609 ~~and 1613~~ of the International Building Code and Section 304.3.2 of this code. ~~Reduced seismic forces shall be permitted~~.

Exceptions:

1. Any existing lateral load-carrying structural element whose demand-capacity ratio with the alteration considered is not more than 10 percent greater than its demand-capacity ratio with the alteration ignored shall be permitted to remain unaltered. For purposes of calculating demand-capacity ratios, the demand shall consider applicable load combinations with design lateral loads or forces in accordance with Section~~s~~ 1609 ~~and 1613~~ of the *International Building Code* and Section 304.3.1 or Section 304.3.2 of this code. ~~Reduced seismic forces shall be permitted~~. For purposes of this exception, comparisons of demand-capacity ratios and calculation of design lateral loads, forces and capacities shall account for the cumulative effects of additions and alterations since original construction.
2. Buildings in which the increase in the demand-capacity ratio is due entirely to the addition of rooftop-supported mechanical equipment individually having an operating weight less than 400 pounds (181.4 kg) and where the total additional weight of all rooftop equipment placed after initial construction of the building is less than 10 percent of the roof dead load. For purposes of this exception, “roof” shall mean the roof level above a particular story.

[BS] 503.5 Seismic Design Category F. Where the *work area* exceeds 50 percent of the building area, and where the building is assigned to Seismic Design Category F, the ~~structure~~ lateral force-resisting system of the altered building shall meet the requirements of Section~~s~~ 1609 ~~and 1613~~ of the International Building Code and Section 304.3.2 of this code. ~~Reduced seismic forces shall be permitted~~.

[BS] 503.6 Bracing for unreinforced masonry parapets on reroofing. Where the intended *alteration* requires a permit for reroofing and involves removal of roofing materials from more than 25 percent of the roof area of a building assigned to Seismic Design Category D, E or F that has parapets constructed of unreinforced masonry, the work shall include evaluation of the existing condition or installation of parapet bracing to resist out-of-plane seismic forces to comply with Section 304.3.2.~~, unless an evaluation demonstrates compliance of such items. Reduced seismic forces shall be permitted.~~

[BS] 503.7 Anchorage for concrete and reinforced masonry walls. Where the *work area* exceeds 50 percent of the building area, the building is assigned to Seismic Design Category C, D, E or F and the building’s structural system includes concrete or reinforced masonry walls with a flexible roof diaphragm, the *alteration* work shall include evaluation of the existing condition or installation of wall anchors at the roof line to comply with Section 304.3.2.~~, unless an evaluation demonstrates compliance of existing wall anchorage. Use of reduced seismic forces shall be permitted.~~

[BS] 503.8 Anchorage for unreinforced masonry walls in major alterations. Where the *work area* exceeds 50 percent of the building area, the building is assigned to Seismic Design Category C, D, E or F and the building’s structural system includes unreinforced masonry bearing walls, the *alteration* work shall include evaluation of the existing condition or installation of wall anchors at the floor and roof lines to comply with Section 304.3.2. ~~, unless an evaluation demonstrates compliance of existing wall anchorage. Reduced seismic forces shall be~~

~~permitted.~~

[BS] 503.9 Bracing for unreinforced masonry parapets in major alterations. Where the *work area* exceeds 50 percent of the building area, and where the building is assigned to Seismic Design Category C, D, E or F, and the building has parapets constructed of unreinforced masonry, the alteration work shall include evaluation of the existing condition or installation of parapet~~shall have~~ bracing ~~installed as needed~~ to resist out-of-plane seismic forces to comply with Section 304.3.2.~~, unless an evaluation demonstrates compliance of such items. Reduced seismic forces shall be permitted.~~

[BS] 503.10 Anchorage of unreinforced masonry partitions in major alterations. Where the *work area* exceeds 50 percent of the building area, ~~and where~~ the building is assigned to Seismic Design Category C, D, E or F,and the building has unreinforced masonry partitions ~~and~~ or nonstructural walls, the alteration work shall include evaluation of the existing condition or removal, anchoring, or alteration of any such partitions or walls within the *work area* and adjacent to egress paths from the*work area*, to comply with Section 304.3.2.~~shall be anchored, removed or altered to resist out-of-plane seismic forces, unless an evaluation demonstrates compliance of such items. Use of reduced seismic forces shall be permitted.~~

[BS] 503.11 Substantial structural alteration. Where the *work area* exceeds 50 percent of the building area and where work involves a *substantial structural alteration*, the lateral load-resisting system of the altered building shall satisfy the requirements of Section~~s~~ 1609 ~~and 1613~~ of the International Building Code and Section 304.3.2 of this code. ~~Reduced seismic forces shall be permitted~~.

Exceptions:

1. Buildings of Group R occupancy with not more than five dwelling or sleeping units used solely for residential purposes that are altered based on the conventional light-frame construction methods of the *International Building Code* or in compliance with the provisions of the *International Residential Code*.
2. Where the intended *alteration* involves only the lowest story of a building, only the lateral load-resisting components in and below that story need comply with this section.

506.5.3 Seismic loads (seismic force-resisting system). Where a *change of occupancy* results in a building being assigned to a higher *risk category*, or where the change is from a Group S or Group U occupancy to any occupancy other than Group S or Group U, thelateral force-resisting system of the building shall ~~satisfy the requirements of Section 1613 of the International Building Code~~ comply with Section 304.3.1 for the new *risk category* ~~using full seismic forces~~.

Exceptions:

1. Where the area of the new occupancy is less than 10 percent of the building area, the occupancy is not changing from a Group S or Group U occupancy, and the new occupancy is not assigned to *Risk Category* IV, compliance with this section is not required. The cumulative effect of occupancy changes over time shall be considered.
2. Where a *change of use* results in a building being reclassified from*Risk Category* I or II to Risk Category III and the seismic coefficient, S_{DS}, is less than 0.33, compliance with this section is not required.
3. Unreinforced masonry bearing wall buildings assigned to *Risk Category* III and to Seismic Design Category A or B, shall be permitted to use Appendix Chapter A1 of this code.
4. Where the change is from a Group S or Group U occupancy and there is no change of risk categoryu~~, se of reduced seismic forces~~ compliance with Section 304.3.2 shall be permitted.

506.5.4 Access to Risk Category IV. Any structure that provides operational access to an adjacent structure assigned to *Risk Category* IV as the result of a *change of occupancy* shall itself ~~satisfy the requirements of~~ comply with Sections 1608~~,~~ and 1609 ~~and 1613~~ of the International Building Code and Section 304.3.1 of this code. ~~For compliance with Section 1613, International Building Code-level seismic forces shall be used.~~ Where operational access to the*Risk Category* IV structure is less than 10 feet (3048 mm) from either an interior lot line or from another structure, access protection from potential falling debris shall be provided.

[BS] 706.3.1 Bracing for unreinforced masonry bearing wall parapets. Where a permit is issued for reroofing for more than 25 percent of the roof area of a building assigned to Seismic Design Category D, E or F that has parapets constructed of unreinforced masonry, the work shall include evaluation of the existing condition or installation of parapet bracing to comply with Section 304.3.2.~~unless an evaluation demonstrates compliance of such items. Reduced seismic forces shall be permitted.~~

[BS] 805.3 Existing structural elements resisting lateral loads. Except as permitted by Section 805.4, where the *alteration* increases design lateral loads, or where the alteration results in prohibited structural irregularity as defined in ASCE 7, or where the *alteration* decreases the capacity of any existing lateral load-carrying structural element, the ~~structure~~ lateral force-resisting system of the altered building or structure shall meet the requirements of Section~~s~~ 1609 ~~and 1613~~ of the International Building Code and Section 304.3.2 of this code. ~~Reduced seismic forces shall be permitted~~.

Exception: Any existing lateral load-carrying structural element whose demand-capacity ratio with the *alteration* considered is not more than 10 percent greater than its demand-capacity ratio with the *alteration* ignored shall be permitted to remain unaltered. For purposes of calculating demand-capacity ratios, the demand shall consider applicable load combinations with design lateral loads or forces in accordance with Section~~s~~ 1609 ~~and 1613~~ of the International Building Code and Section 304.3.1 or Section 304.3.2 of this code. ~~Reduced seismic forces shall be permitted~~. For purposes of this exception, comparisons of demand-capacity ratios and calculation of design lateral loads, forces and capacities shall account for the cumulative effects of *additions* and *alterations* since original construction.

[BS] 906.2 Existing structural elements resisting lateral loads. Where work involves a *substantial structural alteration*, the lateral load-resisting system of the altered building shall be shown to satisfy the requirements of Section~~s~~ 1609 ~~and 1613~~ of the International Building Code and Section 304.3.2 of this code. ~~Reduced seismic forces shall be permitted~~.

Exceptions:

1. Buildings of Group R occupancy with not more than five dwelling or sleeping units used solely for residential purposes that are altered based on the conventional light-frame construction methods of the *International Building Code* or in compliance with the provisions of the *International Residential Code*.
2. Where the intended alteration involves only the lowest story of a building, only the lateral load resisting components in and below that story need comply with this section.

[BS] 906.3 Seismic Design Category F. Where the building is assigned to Seismic Design Category F, the~~structure~~ lateral force-resisting system of the altered building shall meet the requirements of Section~~s~~ 1609 ~~and 1613~~ of the International Building Code and Section 304.3.2 of this code. ~~Reduced seismic forces shall be permitted~~.

[BS] 906.4 Anchorage for concrete and masonry buildings. For any building assigned to Seismic Design Category D, E or F with a structural system that includes concrete or reinforced masonry walls with a flexible roof diaphragm, the *alteration* work shall include evaluation of the existing condition or installation of wall anchors at the roof line of all subject buildings and at the floor lines of unreinforced masonry buildings to comply with Section 304.3.2. ~~unless an evaluation demonstrates compliance of existing wall anchorage. Reduced seismic forces shall be permitted.~~

[BS] 906.5 Anchorage for unreinforced masonry walls. For any building assigned to Seismic Design Category C, D, E or F with a structural system that includes unreinforced masonry bearing walls, the *alteration* work shall include evaluation of the existing condition or installation of wall anchors at the roof line to comply with Section 304.3.2.~~, unless an evaluation demonstrates compliance of existing wall anchorage. Reduced seismic forces shall be permitted.~~

[BS] 906.6 Bracing for unreinforced masonry parapets. Parapets constructed of unreinforced masonry in buildings assigned to Seismic Design Category C, D, E or F shall have their existing condition evaluated or shall have bracing installed to comply with Section 304.3.2. ~~as needed to resist the reduced *International Building Code*-level seismic forces in accordance with Section 304.3, unless an evaluation demonstrates compliance of such items. Use of reduced seismic forces shall be permitted.~~

[BS] 906.7 Anchorage of unreinforced masonry partitions. Where the building is assigned to Seismic Design Category C, D, E or F, unreinforced masonry partitions and nonstructural walls within the *work area* and adjacent to egress paths from the *work area* shall have their existing conditions evaluated or shall be anchored, removed, or altered to resist out-of-plane seismic forces, to comply with Section 304.3.2. ~~unless an evaluation demonstrates compliance of such items. Use of reduced seismic forces shall be permitted~~.

[BS] 1006.3 Seismic loads. Where a *change of occupancy* results in a building being assigned to a higher *risk category*, or where the change is from a Group S or Group U occupancy to any occupancy other than Group S or Group U, the lateral force-resisting system of the building shall comply with Section 304.3.1 ~~satisfy the requirements of Section 1613 of the International Building Code~~ for the new *risk*

category ~~using full seismic forces~~.

Exceptions:

1. Where a *change of use* results in a building being reclassified from *Risk Category* I or II to *Risk Category* III and the seismic coefficient, S_{DS}, is less than 0.33, compliance with this section is not required.
2. Where the area of the new occupancy is less than 10 percent of the building area, the occupancy is not changing from a Group S or Group U occupancy, and the new occupancy is not assigned to *Risk Category* IV, compliance with this section is not required. The cumulative effect of occupancy changes over time shall be considered.
3. Unreinforced masonry bearing wall buildings assigned to *Risk Category* III and to Seismic Design Category A or B shall be permitted to use Appendix Chapter A1 of this code.
4. Where the change is from a Group S or Group U occupancy and there is no change of *risk category*, ~~use of reduced seismic forces~~ compliance with Section 304.3.2 shall be permitted.

[BS] 1006.4 Access to Risk Category IV. Any structure that provides operational access to an adjacent structure assigned to *Risk Category* IV as the result of a change of occupancy shall itself~~satisfy the requirements of~~ comply with Sections 1608~~,~~ and 1609 ~~and 1613~~ of the International Building Code and Section 304.3.1 of this code. ~~For compliance with Section 1613 of the *International Building Code*, the full seismic forces shall be used.~~ Where operational access to *Risk Category* IV is less than 10 feet (3048 mm) from either an interior lot line or from another structure, access protection from potential falling debris shall be provided.

[BS] 1103.2 Lateral force-resisting system. Where the *addition* is structurally independent of the *existing structure*, existing lateral load-carrying structural elements shall be permitted to remain unaltered. Where the *addition* is not structurally independent of the *existing structure*, the lateral force-resisting system of the *existing structure* and its *addition* acting together as a single structure shall ~~meet the requirements of~~ comply with Section~~s~~ 1609 ~~and 1613~~ of the *International Building Code* ~~using full seismic forces~~ and Section 304.3.1 of this code.

Exceptions:

1. Buildings of Group R occupancy with not more than five dwelling or sleeping units used solely for residential purposes where the *existing building* and the *addition* comply with the conventional light-frame construction methods of the *International Building Code* or the provisions of the *International Residential Code*.
2. Any existing lateral load-carrying structural element whose demand-capacity ratio with the *addition* considered is not more than 10 percent greater than its demand-capacity ratio with the *addition* ignored shall be permitted to remain unaltered. For purposes of calculating demand-capacity ratios, the demand shall consider applicable load combinations with design lateral loads or forces in accordance with Section~~s~~ 1609 ~~and 1613~~ of the *International Building Code* and Section 304.3.1 of this code. For purposes of this exception, comparisons of demand-capacity ratios and calculation of design lateral loads, forces and capacities shall account for the cumulative effects of *additions* and *alterations* since original construction.

Reason: This proposal clarifies the way the IEBC references seismic criteria. It makes important and practical clarifications consistent with the intent of the current code, but it is 100% clarification and simplification, with no substantive effect.
The proposal makes four types of changes, as needed, to various provisions that cite the seismic criteria in Section 304:

- Instead of referring vaguely to “full seismic forces” or “reduced seismic forces” – and relying on the user to know where to find those in Chapter 3 – it revises the many triggering provisions to point directly to Sections 304.3.1 or 304.3.2, respectively.
- It clarifies the scope of work within the triggering provisions by referring to the “lateral force-resisting system” instead of the generic “structure” or “building.” Otherwise, the references to IBC Section 1613 would invoke provisions for seismic bracing and anchorage of nonstructural components, which is not intended except in select cases.
- It removes potential confusion associated with references to IBC Section 1613. Instead, it references Section 304.3, which gives IBC Section 1613 as one of several options for seismic criteria.
- It makes revisions to Section 304.3 consistent with the other three changes. In particular, it changes the subsection titles from “forces” to the more complete and correct “criteria,” since the required criteria address more than just design forces.

In addition, the proposal makes various editorial revisions to improve readability and provide more consistent wording. The edit to Section 506.5.4 also corrects the old wording that should have been changed in a past cycle but was apparently missed.

The proposal makes matching changes to the Prescriptive and Work Area methods.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
The proposal is 100% simplification and clarification of intent. It clarifies references to the applicable seismic criteria already provided in Chapter 3, it clarifies the current understanding that those criteria typically apply only to the lateral force-resisting system (not to the structure generally), and it clarifies how the code already allows evaluation as a means of compliance. Thus the substantive effect of the current code is unchanged.

Public Hearing Results

Committee Action **As Modified**

THIS CODE CHANGE WAS HEARD BY THE IBC-STRUCTURAL COMMITTEE.

Committee Modification: 2021 International Existing Building Code
~~[BS] SEISMIC FORCES.~~ ~~The loads, forces and requirements prescribed herein, related to the response of the building to earthquake motions, to be used in the analysis and design of the structure and its components. Seismic forces are considered either full or reduced, as provided in Chapter 3.~~

[BS]503.6 Bracing for unreinforced masonry parapets on reroofing. Where the intended *alteration* requires a permit for reroofing and involves removal of roofing materials from more than 25 percent of the roof area of a building assigned to Seismic Design Category D, E or F that has parapets constructed of unreinforced masonry, the work shall comply with Section 304.3.2 by ~~include~~ evaluation of the existing condition or by installation of parapet bracing to resist out-of-plane seismic forces ~~to comply with Section 304.3.2~~.

[BS]503.7 Anchorage for concrete and reinforced masonry walls. Where the *work area* exceeds 50 percent of the building area, the building is assigned to Seismic Design Category C, D, E or F and the building's structural system includes concrete or reinforced masonry walls with a flexible roof diaphragm, the *alteration* ~~work~~ shall comply with Section 304.3.2 by ~~include~~ evaluation of the existing condition or by installation of wall anchors at the roof line ~~to comply with Section 304.3.2~~.

[BS]503.8 Anchorage for unreinforced masonry walls in major alterations. Where the *work area* exceeds 50 percent of the building area, the building is assigned to Seismic Design Category C, D, E or F and the building's structural system includes unreinforced masonry bearing walls, the *alteration* ~~work~~ shall comply with Section 304.3.2 by ~~include~~ evaluation of the existing condition or by installation of wall anchors at the floor and roof lines ~~to comply with Section 304.3.2~~.

[BS]503.9 Bracing for unreinforced masonry parapets in major alterations. Where the *work area* exceeds 50 percent of the building area, and where the building is assigned to Seismic Design Category C, D, E or F, and the building has parapets constructed of unreinforced masonry, the *alteration* ~~work~~ shall comply with Section 304.3.2 by ~~include~~ evaluation of the existing condition or by installation of parapet bracing to resist out-of-plane seismic forces ~~to comply with Section 304.3.2~~.

[BS]706.3.1 Bracing for unreinforced masonry bearing wall parapets. Where a permit is issued for reroofing for more than 25 percent of the roof area of a building assigned to Seismic Design Category D, E or F that has parapets constructed of unreinforced masonry, the work shall comply with Section 304.3.2 by ~~include~~ evaluation of the existing condition or by installation of parapet bracing ~~to comply with Section 304.3.2~~.

[BS]906.4 Anchorage for concrete and masonry buildings. For any building assigned to Seismic Design Category D, E or F with a structural system that includes concrete or reinforced masonry walls with a flexible roof diaphragm, the *alteration* ~~work~~ shall comply with Section 304.3.2 by ~~include~~ evaluation of the existing condition or by installation of wall anchors at the roof line of all subject buildings and at the floor lines of unreinforced masonry buildings ~~to comply with Section 304.3.2~~.

[BS]906.5 Anchorage for unreinforced masonry walls. For any building assigned to Seismic Design Category C, D, E or F with a structural system that includes unreinforced masonry bearing walls, the *alteration* ~~work~~ shall comply with Section 304.3.2

by ~~include~~ evaluation of the existing condition or by installation of wall anchors at the roof line ~~to comply with Section 304.3.2~~.

[BS]906.6 Bracing for unreinforced masonry parapets. Parapets constructed of unreinforced masonry in buildings assigned to Seismic Design Category C, D, E or F shall comply with Section 304.3.2 by evaluation of the ~~have their~~ existing condition ~~evaluated~~ or by installation of parapet ~~shall have~~ bracing ~~installed to comply with Section 304.3.2~~.

Committee Reason: Approved as modified as the committee noted that the rewording cleans up and clarifies the intent of the sections. The modification removes an unnecessary definition and adjusts the language for consistency. (Vote: 14-0)

Final Hearing Results

EB15-22 AM

EB16-22

Original Proposal

IEBC: [BS] 304.3.1, [BS] 304.3.2

Proponents: David Bonowitz, David Bonowitz, S.E., FEMA-ATC Seismic Code Support Committee (dbonowitz@att.net); Kelly Cobeen, Wiss Janney Elstner Associates, Federal Emergency Management Agency/Applied Technology Council - Seismic Code Support Committee (kcobeen@wje.com); Michael Mahoney, FEMA, FEMA (mike.mahoney@fema.dhs.gov)

THIS CODE CHANGE WILL BE HEARD BY THE IBC-STRUCTURAL CODE COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THAT COMMITTEE.

2021 International Existing Building Code

Revise as follows:

[BS] 304.3.1 Compliance with full seismic forces. Where compliance requires the use of full seismic forces, the criteria shall be in accordance with one of the following methodologies, which shall not be applied in combination with each other:

1. One-hundred percent of the values in the *International Building Code*. Where the existing seismic force-resisting system is a type that can be designated as "Ordinary," values of R, Ω_0 and C_d used for analysis in accordance with Chapter 16 of the International Building Code shall be those specified for structural systems classified as "Ordinary" in accordance with Table 12.2-1 of ASCE 7, unless it can be demonstrated that the structural system will provide performance equivalent to that of a "Detailed," "Intermediate" or "Special" system.
2. ASCE 41, using a Tier 3 procedure and both levels of the two-level performance objective in Table 304.3.1 for the applicable *risk category*.

[BS] 304.3.2 Compliance with reduced seismic forces. Where seismic evaluation and design is permitted to use reduced seismic forces, the criteria used shall be in accordance with one of the following methodologies, which shall not be applied in combination with each other:

1. The *International Building Code* using 75 percent of the prescribed forces. Values of R, Ω_0 and C_d used for analysis shall be as specified in Section 304.3.1 of this code.
2. Structures or portions of structures that comply with the requirements of the applicable chapter in Appendix A as specified in Items 2.1 through 2.4 and subject to the limitations of the respective Appendix A chapters shall be deemed to comply with this section.
   2.1. The seismic evaluation and design of unreinforced masonry bearing wall buildings in *Risk Category* I or II are permitted to be based on the procedures specified in Appendix Chapter A1.
   2.2. Seismic evaluation and design of the wall anchorage system in reinforced concrete and reinforced masonry wall buildings with flexible diaphragms in *Risk Category* I or II are permitted to be based on the procedures specified in Chapter A2.
   2.3. Seismic evaluation and design of cripple walls and sill plate anchorage in residential buildings of light-frame wood construction in *Risk Category* I or II are permitted to be based on the procedures specified in Chapter A3.
   2.4. Seismic evaluation and design of soft, weak or open-front wall conditions in multiple-unit residential buildings of wood construction in *Risk Category* I or II are permitted to be based on the procedures specified in Chapter A4.
3. ASCE 41, using the performance objective in Table 304.3.2 for the applicable *risk category*.

Reason: This proposal makes two clarifications to the application of seismic structural criteria, both of which merely reflect the current intent of the code. There is no substantive change.

In both Section 304.3.1 and 304.3.2, the provision clarifies that the listed options are not to be used in combination with each other. This proposal responds to reports of opportunistic or uninformed use of ASCE 41 force levels with IBC Section 1613 (ASCE 7) analysis procedures and acceptability criteria. The phrase "shall not be applied in combination with each other" is borrowed from IEBC Section 301.3.

In Section 304.3.1, the use of ASCE 41 is clarified by noting that both columns of Table 304.3.1 must be applied. This proposal responds to questions about whether the two columns are interchangeable and to reports of projects complying with only half of the two-part objective. A similar clarification is not needed in Section 304.3.2 because for “reduced” seismic criteria, ASCE 41 usually requires application of only half of the two-part objective, as indicated in Table 304.3.2 footnote a.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
This proposal is entirely a clarification of the current intent of the code, with no substantive effect.

Public Hearing Results

Committee Action **As Submitted**

THIS CODE CHANGE WAS HEARD BY THE IBC-STRUCTURAL COMMITTEE.

Committee Reason: Approval was based on the reason statement provided with the proposal. (Vote:13-1)

Final Hearing Results

EB16-22 AS

EB20-22

Original Proposal

IEBC: 306.3, 306.3.1, 306.2

Proponents: Kevin Duerr-Clark, New York State Department of State, New York State Department of State (kevin.duerr-clark@dos.ny.gov); Chad Sievers, New York State, Deparment of State (chad.sievers@dos.ny.gov)

2021 International Existing Building Code

Revise as follows:

306.2 ~~**306.3**~~ **General** ~~**Maintenance and repair of facilities.**~~ A *facility* that is constructed or altered to be accessible shall be maintained accessible during occupancy. Required accessible means of egress shall be maintained during construction, demolition, remodeling or *alterations* and *additions* to any occupied building.

Exception: Existing means of egress need not be maintained where *approved* temporary means of egress and accessible means of egress systems and *facilities* are provided.

306.2.1~~**306.3.1**~~ **Prohibited reduction in accessibility.** An *alteration* that decreases or has the effect of decreasing accessibility of a building, *facility* or element, thereof, below the requirements for new construction at the time of the*alteration* is prohibited. The number of accessible elements need not exceed that required for new construction at the time of *alteration*.

306.3 ~~**306.2**~~ **Design.** Buildings and *facilities* shall be designed and constructed to be accessible in accordance with this code and the *alteration* and *existing building* provisions in ICC A117.1, as applicable.

Reason: In the last code cycle there were three proposals that modified Section 306.3, EB21, EB22, and EB23. However, when combining all three proposals together, the title for the section "Maintenance and repair," which was changed from "Maintenance of facilities," no longer fits all of the content and subsections that were added.
For example, the second sentence of the section discusses construction, demolition, remodeling or alterations and additions, and the new subsection discusses limitations on alterations specifically. This does not match the title of maintenance and repair.

This proposal moves the topic up to just after scope and renames the section to "General." This is more in-line with how other sections of code address sections that generally provide provisions on the main section topic. For example, see Section 1203 Fire Safety of the 2021 IEBC

Cost Impact: The code change proposal will not increase or decrease the cost of construction
This proposal rearranges the text to better layout the section to start with more general provisions and place the more specific maintenance requirement as a subsection therefore is not intended to change the cost of construction.

Public Hearing Results

Committee Action **As Submitted**

Committee Reason: This proposal appropriately moves the more general section just after scoping which is consistent with the structure of other sections in the IEBC. (Vote: 13-0)

Final Hearing Results

EB21-22

Original Proposal

IEBC: 306.5

Proponents: David Renn, PE, SE, City and County of Denver, Code Change Committee of Colorado Chapter of ICC (david.renn@denvergov.org)

2021 International Existing Building Code

Revise as follows:

306.5 Change of occupancy. Where an *existing*~~*Existing*~~ *buildings* ~~s~~ th~~at undergo~~undergoes a *change of occupancy*~~change of group or occupancy~~ that includes *alterations*, such *alterations* shall comply with Section 306.7.

~~**Exception:** Type B dwelling or sleeping units required by Section 1108 of the International Building Code are not required to be provided in *existing buildings* and *facilities* undergoing a *change of occupancy* in conjunction with *alterations* where the *work area* is 50 percent or less of the aggregate area of the building.~~

Reason: The current language of this section requires buildings with a change of occupancy to comply with Section 306.7, which only includes requirements for alterations. A change of occupancy, by definition, is not an alteration, so it is unclear what is intended by this section. A change of occupancy cannot comply with an alteration requirement unless there is also an alteration associated with the change of occupancy. Essentially, this section is moot as currently written since compliance with 306.7 is only applicable to alterations associated with the change of occupancy and is not applicable to the change of occupancy itself. Furthermore, alterations associated with a change of occupancy would have to comply with 306.7 whether there is a change of occupancy or not.

This proposal makes it clear that only alterations must comply with 306.7, not the change of occupancy. This is needed since some read the current language to imply that a change of occupancy should be treated as an alteration with an associated work area, which is incorrect and doesn't match the definition of work area that only includes reconfigured spaces. The exception to this section is proposed to be deleted since it only applies to a change of occupancy in conjunction with an alteration, and this is already covered by the alteration requirements in Section 306.7.4.

Please support this proposal to bring clarify to accessibility requirements (or lack thereof) for a change of occupancy.

Cost Impact: The code change proposal will not increase or decrease the cost of construction

This proposal will not change the cost of construction as it is simply a clarification of the accessibility requirements (or lack thereof) for a change of occupancy.

Public Hearing Results

Committee Action **As Submitted**

Committee Reason: This proposal clarifies the intent that accessibility requirements do not apply to a change of occupancy unless alterations occur. (Vote: 12-1)

Final Hearing Results

EB21-22 AS

EB22-22

Original Proposal

IEBC: 306.5

Proponents: China Clarke, New York State Department of State, NYS DOS Division of Building Standards and Codes (china.clarke@dos.ny.gov); Kevin Duerr-Clark, New York State Department of State, New York State Department of State (kevin.duerr-clark@dos.ny.gov)

2021 International Existing Building Code

Revise as follows:

306.5 Change of occupancy. *Existing buildings* that undergo a *change of occupancy* ~~change of group or occupancy~~ shall comply with Section 306.7.

Exception: Type B dwelling or sleeping units required by Section 1108 of the International Building Code are not required to be provided in *existing buildings* and *facilities* undergoing a *change of occupancy* in conjunction with *alterations* where the *work area* is 50 percent or less of the aggregate area of the building.

Reason: In the last code cycle, all references to “group” were removed from the IEBC definition of "change of occupancy", the definition was revised, and a definition for “change of use” was added (Code Change No: ADM 3-19 Part I). In light of those changes, the language of Section 306.5 of the 2021 IEBC no longer makes sense. The current use of the words “group or” in Section 305.4 implies that a “change of group” is something other than, or in addition to, a “change of occupancy,” but it is not. We propose to simplify the language of Section 306.5 of the IEBC by removing “group or” and italicizing “change of occupancy”.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
This proposal is merely using the defined term "change of occupancy" and eliminates the term "Group" that is no longer used. The application of this section has not changed simply correlated more appropriately with a defined term.

Public Hearing Results

Committee Action **As Submitted**

Committee Reason: This proposal editorially revises the language to use the correctly defined term of "change of occupancy." (Vote: 13-0)

Final Hearing Results

EB22-22 AS

EB23-22

Original Proposal

IEBC: 306.6, 306.7, 306.7.3, 306.7.4, 306.7.10, 306.7.10.1, 306.7.10.2, 306.7.10.3

Proponents: Mike Nugent, Chair, Building Code Action Committee (bcac@iccsafe.org)

2021 International Existing Building Code

Revise as follows:

306.6 Additions. Where additions contain dwelling and sleeping units, the accessibility requirements shall apply only to the quantity of the dwelling or sleeping units in the addition. Provisions for new construction shall apply to *additions*. An *addition* that affects the accessibility to, or contains an area of, a *primary function* shall comply with the requirements in Section 306.7.1.

306.7 Alterations. A *facility* that is altered shall comply with the applicable provisions in Chapter 11 of the International Building Code,ICC A117.1 and the provisions of Sections 306.7.1 through 306.7.16, unless *technically infeasible*. Where compliance with this section is *technically infeasible*, the *alteration* shall provide access to the maximum extent technically feasible.

1. The altered element or space is not required to be on an accessible route, unless required by Section .
2. Accessible means of egress required by Chapter 10 of the International Building Code are not required to be provided in existing *facilities*.
3. The *alteration* to Type A individually owned dwelling units within a Group R-2 occupancy shall be permitted to meet the provision for a Type B dwelling unit.
4. Type B dwelling or sleeping units required by Section 1107 of the International Building Code are not required to be provided in *existing buildings* and *facilities* undergoing *alterations* where the *work area* is 50 percent or less of the aggregate area of the building.

306.7.3 Alteration of Type A units. The *alteration* to Type A individually owned dwelling units within a Group R-2 occupancy shall be permitted to meet the provision for a Type B dwelling unit.

306.7.4 Type B units. Type B dwelling or sleeping units required by Section 1108 of the International Building Code are not required to be provided in *existing buildings* and *facilities* undergoing *alterations* where the *work area* is 50 percent or less of the aggregate area of the building.

Revise as follows:

306.7.10 Determination of number of units. Where Chapter 11 of the *International Building Code* requires Accessible, Type A or Type B units and where such units are being altered or added within an existing building, the number of Accessible, Type A and Type B units shall be determined in accordance with Sections 306.7.10.1 through 306.7.10.3.

306.7.10.1 Accessible dwelling or sleeping units. Where Group I-1, I-2, I-3, R-1, R-2 or R-4 dwelling or sleeping units are being altered or added within an existing building, the requirements of Section 1108 of the International Building Code for Accessible units apply only to the quantity of ~~spaces~~ dwelling or sleeping units being altered or added.

306.7.10.2 Type A dwelling or sleeping units. Where more than 20 Group R-2 dwelling or sleeping units are being altered or added within an existing building, the requirements of Section 1108 of the International Building Code for Type A units apply only to the quantity of the ~~spaces~~ dwelling or sleeping units being altered or added.

306.7.10.3 Type B dwelling or sleeping units. ~~Where four or more Group I-1, I-2, R-1, R-2, R-3 or R-4 dwelling or sleeping units are~~

~~being added, the requirements of Section 1108 of the International Building Code for Type B units apply only to the quantity of the spaces being added.~~ Where Group I-1, I-2, R-1, R-2, R-3 or R-4 dwelling or sleeping units are being altered or added within an existing building and where the *work area* is greater than 50 percent of the aggregate area of the building, the requirements of Section 1108 of the International Building Code for Type B units apply only to the quantity of the ~~spaces~~ dwelling or sleeping units being altered or added.

Reason: The intent of this proposal is to clarify where 'adding' units is for additions or for within existing buildings. With the current text change of occupancy for all or part of a building that converts from another use to apartments or hotel rooms could be interpreted as adding units, or an alteration.
The added sentence to Section 306.6 would clarify that only the dwelling units in the addition are considered for application of accessibility, not where the addition would now push the entire buildings to over 20 units (Type A) or 4 or more (Type B). This is consistent with FHA.

The text in the first sentence of Section 306.7.10.3 appears to addresses additions for Type B units in a section that is under alterations (306.7). The modification to Section 306.6 will address physical additions. Section 306.7.10.3 will address alterations and added units within existing buildings. This will also provide similar terminology for all three types – Accessible, Type A and Type B. This requirement exceed FHA.The current text for Accessible and Type A units is not clear if this is talking about additions; or units being added within an existing building where they did not exist before. The revised text in Sections 306.7.10, 306.7.10.1 and 306.7.10.2 would clarify that this section is for alterations, including a change of occupancy of part or all of a building.
This proposal is submitted by the ICC Building Code Action Committee (BCAC).
BCAC was established by the ICC Board of Directors in July 2011 to pursue opportunities to improve and enhance assigned International Codes or portions thereof. In 2020 and 2021 the BCAC has held several virtual meetings open to any interested party. In addition, there were numerous virtual Working Group meetings for the current code development cycle, which included members of the committee as well as interested parties. Related documents and reports are posted on the BCAC website at https://www.iccsafe.org/products-and-services/i-codes/code-development/cs/building-code-action-committee-bcac/.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
This proposal is merely trying to clear up the applicability of when Accessible units, Type A units and Type B units must be added. Clarification between additions to existing buildings and an addition of new units or alterations to existing units in the existing building is provided. This avoids counting units in the existing buildings inappropriately which will avoid requiring more Accessible Units, Type A units and Type Units than is required. The proposal is not intended as a technical change.

Public Hearing Results

Committee Action **As Modified**

Committee Modification: 306.6 Additions. Where additions contain dwelling ~~and~~ or sleeping units, the accessibility requirements shall apply only to the quantity of the dwelling or sleeping units in the addition. Provisions for new construction shall apply to additions. An addition that affects the accessibility to, or contains an area of, a primary function shall comply with the requirements in Section 306.7.1

Committee Reason: This proposal was approved to clarify which units are counted to determine the number and type of units required including Accessible units, Type A units and Type B units. The modification simply changes the term "and" to "or" in the first sentence of Section 306.6 so that where either occur this sections is applicable. The use of "or" is consistent with the end of that sentence in Section 306.6.(Vote: 14-0)

Final Hearing Results

EB23-22 AM

EB24-22

Original Proposal

IEBC: 306.6.1 (New), 306.6.1.1 (New)

Proponents: Daniel Nichols, MTA Construction and Development, MTA Construction and Development (dnichols@mnr.org)

2021 International Existing Building Code

Add new text as follows:

306.6.1 Accessible Means of Egress. At least one accessible means of egress from the addition shall be provided where required by Section 1009.1 of the International Building Code. A second accessible means of egress shall be provided where an additional means of egress is required due to the addition.

306.6.1.1 Additions for Elevators. Where an addition is being constructed to accommodate the installation of an elevator or elevators to improve accessibility, an accessible means of egress in accordance with Section 1009.1 of the International Building Code is not required when all of the following conditions are provided:

1. Two-way communication is provided at all elevator landings that are part of the addition in accordance with Section 1009.8 of the International Building Code.
2. Each elevator landing is on floor level with access to an exit or a stairway with a minimum width of 36 inches (914 mm).
3. The elevator does not serve a required accessible floor or occupied roofmore than four stories above or below the level of exit discharge.

Reason: In the 2015 Group A Code Development Cycle, code change proposal E34-15 was submitted to modify the requirements of Section 1009.1 regarding accessible means of egress in existing buildings. The proposal was modified at the committee action hearings and removed exception 1 that read “Accessible means of egress are not required to in existing buildings”
The proposal was submitted to address potential confusion with the removal of Chapter 34 in the IBC and making the IEBC the clearinghouse for all existing buildings undergoing work. Here is the reason statement from E34-15:

“This blanket exception should be removed from the IBC for two reasons. First, with the change to Chapter 34 of the IBC during the last code change cycle, all existing building requirements are now located in the IEBC. Exception 2 to IEBC Section 410.6 and exception 2 to IEBC Section 705.1 already contain this language, so it is simply redundant to be placed in the IBC. Second, the exception has been misused as a reason for eliminating existing accessible means of egress. Buildings which have been constructed since the adoption of the accessible means of egress provisions in the IBC (and some legacy codes) should be required to maintain these accessible means of egress elements and sections within the IEBC support that concept. By making a blanket statement in the IBC that they are simply not required because the building is "existing" can be construed as meaning that the accessible means of egress are no longer needed. This confusion should be removed from the IBC and allow the IEBC to note how this is supposed to be addressed in existing buildings.”

This removal of the exception was approved (as modified by the committee), approved on the consent agenda, and the exception no longer exists since the 2018 IBC.

In the same Code Development Cycle, a reorganization of the IEBC placed all accessibility requirements in one location so there is consistent application regardless of compliance method.

Whereas we agree with the intent of these changes to minimize confusion for code users, it did create a technical change to the application of accessible means of egress requirements as in apples to additions. IEBC Section 306.6 states that “Provisions for new construction shall apply to additions. An addition that affects the accessibility to, or contains an area of, a primary function shall comply with the requirements in Section 306.7.1.” Unlike the alteration section (IEBC 306.7.2) the has an exception that states “Accessible means of egress required by Chapter 10 of the International Building Code are not required to be provided in existing facilities,” there is no such exception for additions.

This creates a disconnect between relative levels of safety provided by an accessible means of egress in alterations versus additions. If an elevator is placed through existing floor systems in an existing building undergoing an Alteration Level 3 rehabilitation, no accessible means of egress is required. However, the extension of the building footprint to place an elevator or an enclosed ramp outside the existing exterior walls is considered an addition and requires accessible means of egress.

The proposed language addresses two items regarding additions. The first proposed Section, 306.6.1, quantifies the number of accessible means of egress that needs to be provided. The baseline is one and is consistent with 1009.1. The second means of egress is based on if an additional means of egress is being added due to the addition, rather than relying on the new construction table. This is because an addition may already have sufficient exiting due to the addition.

The second section, 306.6.1.1, specifically addresses additions due to elevator installation. The allows for the use of existing exit and exit access stairways that meet minimum requirements, requires the same two-way communication system as found in 1009.1 for consideration of new exit and exit access stairways, and retains the limit of numbers of floors above or below the level of exit discharge prior to needing an elevator with emergency power. The intent here is to utilize existing stairways that can be used for rescue assistance but require the two-way communication as an increased level of safety than was found in the previous versions of the IBC.

Cost Impact: The code change proposal will decrease the cost of construction
The decrease in construction is mainly due to limiting addition work to 1 AMOE, unless stairways are being added for other code requirements like addressing increased occupant loads. Providing two accessible means of egress in an exiting building that is undergoing an addition is costly for materials, as well as the potential need for land purchases in urban areas for the additional building footprint or tenant revenue cuts due to leasable area losses. For an average cost of installing a new two-stop elevator in an existing below-grade rail station (excavation for one story below grade, EMR, landings, comms, and all other ASME A17.1 requirements) at $16M, the accompanying stairway cost is a average of $2.24M without consideration of excavation for below-grade application or built in area of refuge or enlarged landings. Even though the pricing is based on current public work values in the metropolitan NYC area, the addition of a stairway which was never previously required is an increase of 14% of construction costs.

For the additions for elevators sub-section, the decrease in construction is the same as recognizing the allowance to put in elective elevators without an approximately 14% increase in cost for an additional stairway. Additionally, the potential increase in construction costs due to the required two-way communication system is minimized due to the two-way communication system that is already required by ASME A17.1 and the accessible two-way system required in IBC Section 3001.2. The value of the head-end and monitoring connections are already required by these requirements.

Public Hearing Results

Committee Action **As Modified**

Committee Modification:
306.3.1 Prohibited reduction in accessibility. An *alteration* or addition that decreases or has the effect of decreasing accessibility of a building, *facility* or element, thereof, below the requirements for new construction at the time of the*alteration* or addition is prohibited. The number of accessible elements need not exceed that required for new construction at the time of *alteration* or addition.

306.6.1 Accessible Means of Egress. ~~At least~~ Not less than one accessible means of egress from the addition shall be provided where required by Section 1009.1 of the International Building Code. ~~A second~~ An additional accessible means of egress shall be provided where an additional means of egress is required due to the addition.

306.6.1.1 Additions for Elevators. Where an addition is being constructedexclusively to accommodate the installation of an elevator or elevators to improve accessibility, an accessible means of egress in accordance with Section 1009.1 of the International Building Code is not required ~~when~~ where all of the following conditions are provided:

1. Two-way communication is provided at all elevator landings that are part of the addition in accordance with Section 1009.8 of the International Building Code.

2. Each elevator landing is on floor level with access to ~~an~~ a horizontal exit or to a stairway with a ~~minimum~~ width of not less than 36 inches (914 mm).
3. The elevator does not serve a required accessible floor or occupied roof more than four stories above or below the level of exit discharge.

Committee Reason: This proposal makes it clear that additions are new construction and some level of accessible means of egress is necessary. It also clarifies that where the addition triggers the need for an additional exit an additional accessible egress is required. Section 306.6.1.1 is necessary so that an addition that is only for the sake of adding accessibility should not trigger full compliance with the accessible means of egress requirements. The modifications address several issues. The modification to revise current IEBC Section 306.3.1 ensures that no reduction in accessible egress is possible in additions addressing applicability concerns based upon the language proposed for new Section 306.6.1. In Section 306.6.1 the use of the term "additional" versus "second" makes it more clear that a new means of egress is now required for the building due to the addition. The term "second" could be construed as not requiring if the building already had 2 means of egress. Item 2 of Section 306.6.1.1 was clarified to focus on access to a horizontal exit instead of more generally requiring access to an exit. Other modifications were simply related to preferred code terminology such as "when" to "where," as it is not time specific, or "not less than" versus "minimum." (Vote: 14-0)

Public Comments

Public Comment 1

Proponents: Ardel Jala, Seattle Dept of Construction & Inspections, Washington Association of Building Officials Technical Code Dev Committee (ardel.jala@seattle.gov); Richard Williams, CWA Consultants, Washington Association of Building Officials Technical Code Dev Committee (richard@cwaconsultants.net); Micah Chappell, Seattle Department of Construction and Inspections, Washington Association of Building Officials Technical Code Development Committee (micah.chappell@seattle.gov) requests As Modified by Public Comment

Further modify as follows:

2021 International Existing Building Code

306.6.1 Accessible Means of Egress. Not less than one accessible means of egress from the addition shall be provided where required by Section 1009.1 of the International Building Code. An additional accessible means of egress shall be provided where an additional means of egress is required due to the addition. Where an accessible means of egress serving the addition is within the existing building, the following are required:

1. An accessible route from the addition to the existing building shall be provided.
2. The accessible means of egress in the existing building shall comply with Section 306.7.1.

Commenter's Reason: While the charging language in Section 306.6 makes it clear that the requirements for new construction apply to additions, the committee supported adding a new Section 306.6.1 to clarify that as stated in the reason statement, "some level of accessible means of egress is necessary." The proposal as modified at the committee action hearings requires not less than one accessible means of egress from the addition where and an additional means of egress where required due to the addition.
This public comment further modifies this section to clarify that when the addition is served by an existing accessible means of egress, that an accessible route must be provided from the addition to the accessible means of egress and that alterations to the existing accessible means of egress shall comply with alterations Section 306.7.1. This is consistent with section 306.6 which also points to Section 306.7.1 for the addition.

Cost Impact: The net effect of the Public Comment and code change proposal will not increase or decrease the cost of construction
This public comment is a clarification and has no cost impact.

Final Hearing Results

EB24-22 AMPC1

EB25-22

Original Proposal

IEBC: 306.7.1

Proponents: Lee Kranz, Self, Washington Association of Building Officials Technical Code Development Committee (lkranz@bellevuewa.gov); Micah Chappell, Seattle Department of Construction and Inspections, Washington Association of Building Officials Technical Code Development Committee (micah.chappell@seattle.gov)

2021 International Existing Building Code

Revise as follows:

306.7.1 Alterations affecting an area containing a primary function. Where an *alteration* affects the accessibility to, or contains an area of *primary function*, the route to the *primary function* area shall be accessible. ~~The accessible route to the *primary function* area shall include toilet *facilities* and drinking fountains serving the area of *primary function*.~~ Toilet facilities and drinking fountains serving the area of primary function, including the route from the area of primary function to these facilities, shall be accessible.

Exceptions:

1. The cumulative costs of providing the accessible route of travel, toilet facilities and drinking fountains are not required to exceed 20 percent of the costs of the *alterations* affecting the area of *primary function*.
2. This provision does not apply to *alterations* limited solely to windows, hardware, operating controls, electrical outlets and signs.
3. This provision does not apply to *alterations* limited solely to mechanical systems, electrical systems, installation or *alteration* of fire protection systems and abatement of hazardous materials.
4. This provision does not apply to *alterations* undertaken for the primary purpose of increasing the accessibility of a *facility*.
5. This provision does not apply to altered areas limited to Type B dwelling and sleeping units.

Reason: The current language in Section 306.7.1 related to the need to provide an accessible route of travel, accessible toilet facilities and drinking fountains for primary function areas being altered has been the source of confusion for many since it was added to the code. We believe that the current language, which attempts to combine a mandate to improve the accessible route to primary function areas, which is already addressed in the first sentence of this section, with improvements to existing restrooms and drinking fountains, is the source of this confusion. Is the current language intended to require just the path of travel to these facilities or improvements to them as well? This proposal clarifies the language in favor of the latter interpretation.

Separating these two distinct aspects of barrier-free access helps the reader to understand the intent of this provision which is: 1) provide an accessible route to the primary function area, and 2) make accessibility improvements to existing restrooms and drinking fountains serving the area of primary function. By removing the current language and replacing it with a separate and distinct sentence addressing the need to update restrooms and drinking fountains we are eliminating the ambiguity of the current code which will improve consistent enforcement.

Exception number one has also been modified to make it clear that the cumulative cost of these improvements are not required to exceed 20% of the construction budget. The current language can be interpreted to look at just the cost of the route of travel, which would not include the cost of upgrading toilet facilities or drinking fountains but ICC trainers teach that all improvements to accessibility are intended to be counted toward the 20% exception.

Cost Impact: The code change proposal will not increase or decrease the cost of construction

This proposal is intended to simply reflect what was intended that both the path and the facilities be accessible therefore will not change the cost of construction.

Public Hearing Results

Committee Action **As Submitted**

Committee Reason: Approval was based upon the fact that the language will more clearly convey that the intent is to provide accessible toilet facilities and drinking fountains on the route to the primary function areas they serve. (Vote: 14-0)

Public Comments

Public Comment 1

Proponents: Richard Williams, Washington Association of Building Officials Technical Code Dev Committee, Washington Association of Building Officials Technical Code Dev Committee (richard@cwaconsultants.net); Micah Chappell, Seattle Department of Construction and Inspections, Washington Association of Building Officials (micah.chappell@seattle.gov) requests As Modified by Public Comment

Further modify as follows:

2021 International Existing Building Code

306.7.1 Alterations affecting an area containing a primary function. Where an *alteration* affects the accessibility to, or contains an area of *primary function*, the route to the *primary function* area shall be accessible. Toilet facilities and drinking fountains serving the area of primary function, i~~ncluding~~ and the route from the area of primary function to these facilities, shall be accessible.

Exceptions:

1. The cumulative costs of providing the accessible route ~~of travel~~, toilet facilities and drinking fountains are not required to exceed 20 percent of the costs of the *alterations* affecting the area of *primary function*.
2. This provision does not apply to *alterations* limited solely to windows, hardware, operating controls, electrical outlets and signs.
3. This provision does not apply to *alterations* limited solely to mechanical systems, electrical systems, installation or *alteration* of fire protection systems and abatement of hazardous materials.
4. This provision does not apply to *alterations* undertaken for the primary purpose of increasing the accessibility of a *facility*.
5. This provision does not apply to altered areas limited to Type B dwelling and sleeping units.

Commenter's Reason: This is a minor clean up to the language of our original proposal. We are replacing the word 'including' with 'and' for clarity. By removing the words 'of travel' in exception 1, we are using a defined term accessible route instead of accessible route of travel. We urge your approval.

Cost Impact: The net effect of the Public Comment and code change proposal will not increase or decrease the cost of construction
This is a change to the wording of our original proposal and will not affect the cost of construction.

Final Hearing Results

EB25-22 AMPC1

EB26-22

Original Proposal

IEBC: 306.7.1

Proponents: Lee Kranz, Self, Washington Association of Building Officials Technical Code Development Committee; Gene Boecker, CCI, self (geneb@codeconsultants.com); Micah Chappell, Washington Association of Building Officials Technical Code Development Committee, Washington Association of Building Officials Technical Code Development Committee (micah.chappell@seattle.gov)

2021 International Existing Building Code

Revise as follows:

306.7.1 Alterations affecting an area containing a primary function. Where an *alteration* affects the accessibility to, or contains an area of *primary function*, the route to the *primary function* area shall be accessible. The accessible route to the *primary function* area shall include toilet *facilities* and drinking fountains serving the area of *primary function*. Priority shall be given to the improvements affecting the *accessible route* to the *primary function* area.

Exceptions:

1. The costs of providing the accessible route are not required to exceed 20 percent of the costs of the *alterations* affecting the area of *primary function.*
2. This provision does not apply to *alterations* limited solely to windows, hardware, operating controls, electrical outlets and signs.
3. This provision does not apply to *alterations* limited solely to mechanical systems, electrical systems, installation or *alteration* of fire protection systems and abatement of hazardous materials.
4. This provision does not apply to *alterations* undertaken for the primary purpose of increasing the accessibility of a *facility*.
5. This provision does not apply to altered areas limited to Type B dwelling and sleeping units.

Reason: The provisions of Section 306.7.1 are confusing and are not enforced in a consistent manner. Unless you've had ICC training on the topic, most people are not be able to discern what the intent of this section is or how it should be applied. This proposal is intended to provide guidance for building officials and designers to clearly state that the priority shall be given to the improvements affecting the *accessible route* to the *primary function* area over making other improvements such as updating restrooms and drinking fountains to become accessible. There is broad consensus that providing an accessible route to the primary function area is the most important aspect of this code section. It approved, this code change will create more consistent enforcement and accomplish the goal of allowing non-ambulatory occupants to access the areas of primary function being altered.

Cost Impact: The code change proposal will not increase or decrease the cost of construction

This code change will not affect the cost of construction. This proposal clarifies that the intent of this section is to give priority to improvements to the accessible route to the area of primary function over other improvements. The maximum 20% cost limitations will still apply.

Public Hearing Results

Committee Action **As Submitted**

Committee Reason: The proposal clarifies the intent that priority should be given to the accessible route over other accessible features. There was some concern over the interpretation of the term "priority" and perhaps more specific language could be used in place of the term to provide more clarity of intent. (Vote: 14-0)

Final Hearing Results

EB26-22 AS

EB27-22

Original Proposal

IEBC: 306.7.7

Proponents: Andrew Cid, Barrier Free Solutions For The Deaf and Hard of Hearing, BARRIER FREE SOLUTIONS FOR THE DEAF AND HARD OF HEARING

2021 International Existing Building Code

Revise as follows:

306.7.7 Elevators. Altered elements of existing elevators shall comply with ASME A17.1. Where the elevator emergency communication system is altered or replaced, that system shall comply with Section 3001.2 of the *International Building Code*. Such elements shall also be altered in elevators programmed to respond to the same hall call control as the altered elevator.

Reason: The proposed revision is in recognition that an alteration or modification to elevator emergency communication equipment in an existing elevator would be required to comply with the appropriate provisions of the International Building Code. The applicable provisions associated with elevators are noted in Chapter 30 (see code changes G177-21 AMPC1 and G178-21 AS). It is recognized that existing elevators that are modified or altered can include many elements associated with the elevator system such as control panels and emergency communication capabilities. The proposed revision for the reference to 3001.2 of the 2021 edition of the IBC (proposed 3001.6 of the 2024 edition) is to highlight that there are specific requirements related to emergency communication system that are required in the IBC. This is also to highlight that the current emergency communication requirements found in the ASME A17.1 are different and do not contain the updated and enhanced communication capabilities. This particular reference to the 3001.2 of the IBC is to establish a point of consistency between the various ICC documents as the IBC currently contains the specific requirements for emergency elevator communication that have been accepted by the ICC membership since the 2018 edition of the IBC. The elevator industry has started to incorporate the emergency communication provisions as referenced in the IBC as they have introduced new products in the marketplace in Las Vegas and Washington State plus several others related to emergency communication systems for new construction per 3001.2. It is recognized that this technology can be incorporated into existing elevators as they are modernized or updated as it is now time to move forward and incorporate this life safety feature into existing buildings.

Cost Impact: The code change proposal will increase the cost of construction
There will be a minimal cost increase in the cost of alterations of elevators.

Public Hearing Results

Committee Action **As Submitted**

Committee Reason: The proposal was approved as the requirements are consistent with the language in the IBC and it was a reasonable trigger to communication equipment that will comply with Section 3001.2 when the existing communication is either altered or replaced. (Vote: 13-0)

Final Hearing Results

EB27-22 AS

EB28-22

Original Proposal

IEBC: 306.7.8 (New)

Proponents: Ardel Jala, Seattle Department of Construction & Inspections, Washington Association of Building Officials Technical Code Development Committee (ardel.jala@seattle.gov); Micah Chappell, Seattle Department of Construction and Inspections, Washington Association of Building Officials Technical Code Development Committee (micah.chappell@seattle.gov)

2021 International Existing Building Code

Add new text as follows:

306.7.8 Limited-use/Limited-application Elevators. Limited-use/Limited-application elevators installed in accordance with ASME A17.1 shall be permitted as a component of an accessible route.

Reason: A Limited-use/Limited-application (LULA) elevator is a type of elevator often proposed as part of an accessible route in existing buildings. Technical requirements for LULAs can be found in ASME A17.1/CSA B44 Safety Code for Elevators and Escalators. In comparison to a commercial elevator; LULAs have smaller car sizes, smaller capacity, slower speeds and shorter rise. In comparison to a platform lift, a LULA provides greater capacity and faster speed. A LULA is more expensive than a platform lift but can cost less than a commercial elevator.

Neither the IBC or IEBC currently provide guidance on where and when a LULA is accepted. Jurisdictions must look to other codes and guidelines to determine where a LULA is permitted. The Guide to the ADA Accessibility Standards explains criteria for elevators and platform lifts. Section 206.6 Required Compliance states: "In facilities not required to have an accessible route between stories or to mezzanines, a limited-use/limited-application (LULA) elevator is permitted. LULAs also are allowed as an alternative to platform lifts and private residence elevators." See: https://www.access-board.gov/ada/guides/chapter-4-elevators-and-platform-lifts/

Platform lifts are permitted as a component of an accessible route in an existing building or facility per IEBC Section 306.7.8. This proposal makes it clear that a LULA, given it is at least equivalent to a platform lift in function, should be allowed where and when a platform lift is allowed in an existing building or facility.

It has been argued that a LULA should be prohibited because it does not meet accessibility requirements. However ICC A117.1 Section 408 provides accessibility requirements for LULAs. Section 408 has requirements for the LULA elevator landing, door and car requirements. There are commercially available LULAs that meet the accessibility requirements of Section 408.

It has also been argued that a LULA is prohibited because it does not meet stretcher requirements. This proposal would not permit a LULA in an existing building where a stretcher sized elevator is required. Where there are multiple code provisions that apply, they all must be satisfied and the most restrictive applies when there is a conflict.

This proposal is appropriate to include in the IEBC and does not extend to new construction. This proposal is an extension of the flexibility that already exists in the IEBC for platform lifts.

Cost Impact: The code change proposal will not increase or decrease the cost of construction

This code change proposal permits use of a LULA where the IEBC already permits use of a platform lift. Use of a LULA over a platform lift is a voluntary increase over the base code requirement.

Public Hearing Results

Committee Action **As Submitted**

Committee Reason: The specific allowance within the IEBC for limited-use/limited application elevators was felt to be necessary.

Technically LULA elevators are allowed by the IBC but it is difficult to make that connection. It was suggested that more clarity could be added to the IBC in the future for use in existing buildings. (Vote: 13-1)

Final Hearing Results	
EB28-22	AS

EB29-22

Original Proposal

IEBC: 306.7.8

Proponents: Lee Kranz, Self, Washington Association of Building Officials Technical Code Development Committee (lknewcastle@gmail.com); Micah Chappell, Washington Association of Building Officials Technical Code Development Committee, Washington Association of Building Officials Technical Code Development Committee (micah.chappell@seattle.gov)

2021 International Existing Building Code

Revise as follows:

306.7.8 Platform lifts. Vertical and inclined platform (wheelchair) lifts installed in accordance with ASME A18.1 shall be permitted as a component of an accessible route.

Reason: This code change is for clarification purposes only. The IEBC Commentary indicates that the term 'platform lift' is intended to include both vertical and inclined lifts so it should be stated that way in the code to eliminate the need for further research. Because ASME A18.1 covers three types of lifts (vertical and inclined lifts, and stairway chair lifts), the proposed language in Section 306.7.8 adds clarity for the reader as to what types of conveyances are allowed by this section of the code. It also reduces potential confusion whether IBC Section 1003.3.4 allows platform lifts to project into the required width of the stair while in operation, because this section is more specific than 1003.3.4, following the principle in Section 102.1 that more specific provisions govern over more general provisions. If approved, the proposed language will give building officials confidence that inclined lifts are permitted to be used as conveyances even though they protrude over the required width of the stair.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
This proposal is merely clarify the two types of lifts so further review of the standard is not necessary. Both types of lifts are already permitted so there are no substantive changes proposed so therefor no changes to the cost of construction are anticipated.

Public Hearing Results

Committee Action **As Submitted**

Committee Reason: This proposal was approved as it makes it clear that chair lifts are not included in the allowance for platform lifts. (Vote: 14-0)

Final Hearing Results

EB29-22 AS

EB31-22

Original Proposal

IEBC: 306.7.13, 306.7.14 (New)

Proponents: Marsha Mazz, United Spinal Association (mmazz@accessibility-services.com); Gene Boecker, CCI, self (geneb@codeconsultants.com); Gina Hilberry, Cohen Hilberry Architects, United Cerebral Palsy (gina@cohenhilberry.com); Laurel Wright, ANSI A117.1 - Retired Member, Chair - A117.1 Adult Changing Table SubCommittee (lwwright8481@icloud.com)

2021 International Existing Building Code

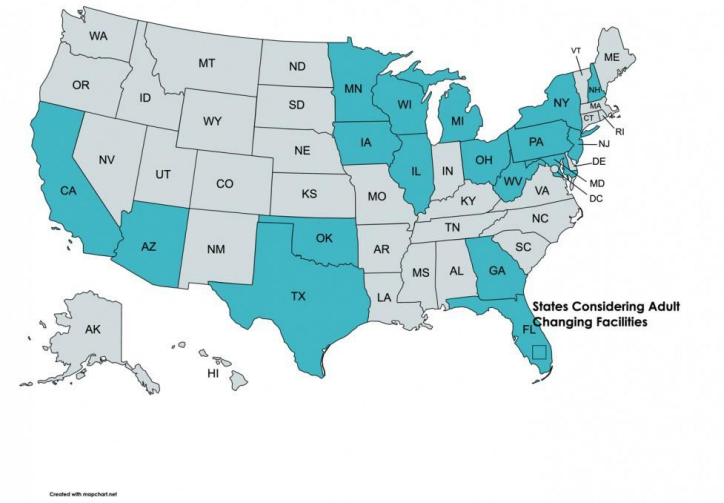
306.7.13 Additional toilet and bathing facilities. In assembly and mercantile occupancies, where additional toilet fixtures are added, not fewer than one accessible family or assisted-use toilet room shall be provided where required by Section 1110.2.1 of the International Building Code. In recreational *facilities*, where additional bathing rooms are being added, not fewer than one family or assisted-use bathing room shall be provided where required by Section 1110.2.1 of the International Building Code.

Add new text as follows:

306.7.14 Adult changing stations. Where additional toilet facilities are being added, in occupancies where adult changing stations are required by Section 1110.4.1 of the *International Building Code,* not fewer than one accessible family or assisted-use toilet room with an adult changing station shall be provided in accordance with Section 1110.4 of the *International Building Code*.The adult changing station shall be permitted to be located in an family or assisted-use toilet room or bathing room required by Sections 306.7.11, 306.7.12 or 306.7.13.

Reason: The requirement for adult changing stations in large assembly, mercantile, college lecture halls and highway rest stops was added in the 2024 IBC by Code changes P37-21 Part 2(AMPC1), E141-21(AMPC1), E142-21 (AMPC1 & 2). In addition to the changing table, the room is required to have an accessible toilet and lavatory. This proposal is consistent with where family assisted use toilet rooms are required in the IEBC by Section 306.7.13. The last sentence makes it clear that both requirements can be met by the same toilet room. An adult changing station contains a changing table large enough to accommodate an adult-sized person that is located in proximity to sanitary facilities, such as lavatories and trash disposal. Without such facilities, severely disabled people who cannot use toilets because of their disability suffer from severe isolation because they and their caregivers must return home to be changed. This lack of access has a profound impact not only on the person with a disability, but on their caregivers who are often their immediate family members. Normal activities outside the home such as shopping, entertainment, and travel must be curtailed because of a lack of safe and sanitary places to change. On occasion, caregivers report they have no option other than to change the adults for whom they care on restroom floors. Aside from the obvious sanitation concerns which is far from minimal, this practice raises serious questions about how we as a community afford people with significant disabilities a measure of human dignity and protect their right to privacy.

The ICC A117.1 is currently looking at proposals to the ICC A117.1 that will include the technical requirements for these tables. In order to address this problem, the ICC A117 committee established a task group to develop requirements for adult changing stations. The committee is expected to complete its work in March, 2021 - in time for consideration by the full committee for inclusion in the next edition of the standard which we expect to be available in time to be referenced by the 2024 IBC. The task group is comprised of committee members and interested parties - many of whom are parents of adult disabled children or who are caring for their parents. While these accommodations are not typically provided in any other type of occupancy, eleven airports, soon to be twelve, in the United States already voluntarily provide adult changing tables. Advocates for adult changing stations have had minimal success outside the code development process through state legislation, such as in California, Georgia, Canada, and the European Union. However, we believe that the building code is a far more appropriate vehicle for solving what amounts to a problem in the built environment and, we are convinced that a patchwork of state and local requirements is inefficient and presents unnecessary compliance challenges to building owners and managers.



Because there were two modifications to E142-21, a draft of the 2024 IBC for this section is included below.

1110.4 Adult Changing Stations. Where provided, adult changing stations shall be accessible. Where required, adult changing stations shall be accessible and shall comply with sections 1110.4.1 through 1110.4.4.

1110.4.1 Where required. At least one adult changing station shall be provided in all the following locations:

1. In assembly and mercantile occupancies, where family or assisted-use toilet or bathing rooms are quired to comply with Section 1110.2.1.

2. In Group B occupancies providing educational facilities for students above the 12th grade, where an aggregate of twelve of more male and female water closets are required to serve the classrooms and lecture halls.

3. In Group E occupancies, where a room or space used for assembly purposes requires an aggregate of six or more male and female water closets for that room or space.

4. In highway rest stops and highway service plazas.

1110.4.2 Room. Adult changing stations shall be located in toilet rooms that include only one water closet and only one lavatory. Fixtures located in such rooms shall be included in determining the number of fixtures provided in an occupancy. The occupants shall have access to the required adult changing station at all times that the associated occupancy is occupied.

Exception: Adult changing stations shall be permitted to be located in family or assisted toilet rooms required in Section 1110.2.1.

1110.4.3 Prohibited location. The accessible route from separate-sex toilet or bathing rooms to an accessible adult changing station shall not require travel through security checkpoints.

1110.4.4 Travel distance. The adult changing station shall be located on an accessible route such that a person is no more than two stories above or below the story with the adult changing station and the path of travel to such facility shall not exceed 2000 feet.

Cost Impact: The code change proposal will increase the cost of construction
There will be the cost of a changing table and the increase in room size. We have made every attempt to minimize costs by piggy backing on the existing requirements for family or assisted-use toilet rooms.

Public Hearing Results

Committee Action **As Submitted**

Committee Reason: This proposal was approved as it was consistent with actions taken in Group A. There was some concern as to how this would affect small businesses. However, this requirement would only address toilet facilities versus specific fixtures. Toilet facilities, as defined in the IPC, are more substantial than a single toilet fixture. (Vote: 8-6)

Final Hearing Results

EB31-22 AS

EB32-22

Original Proposal

IEBC: SECTION 308, 308.1

Proponents: Mike Nugent, Chair, Building Code Action Committee (bcac@iccsafe.org); John Williams, Committee on Healthcare (ahc@iccsafe.org); Robert Marshall, FCAC, FCAC (fcac@iccsafe.org)

2021 International Existing Building Code

SECTION 308
CARBON MONOXIDE DETECTION

Revise as follows:

308.1 Carbon monoxide detection. Where an *addition*, *alteration*, *change of occupancy* or relocation of a building is made to an existing building ~~Group I-1, I-2, I-4 and R occupancies and classrooms of Group E occupancies~~, the *existing building* shall be provided with carbon monoxide detection in accordance with the International Fire Code or Section R315 of the *International Residential Code*.

Exceptions:

1. Work involving the exterior surfaces of buildings, such as the replacement of roofing or siding, the addition or replacement of windows or doors, or the addition of porches or decks.
2. Installation, alteration or *repairs* of plumbing or mechanical systems, other than fuel-burning appliances.
3. Work classified as Level 1 *Alterations* in accordance with Chapter 7.
4. Carbon monoxide detection is not required in each sleeping unit where carbon monoxide detection, which transmits an alarm signal to an approved location, is provided in each space containing a carbon monoxide source.

Reason: The change to the first paragraph in Section 308.1 to make this section consistent with the actions taken on Group A on F102-21 and F116-21 which broadened the requirements for CO detection to all occupancies that present a CO hazard.

Regarding the addition of Exception 4, the revised text in F102-21 and F116-21 expands the CO source to include stoves and fireplaces, not just fuel fired appliances. The Healthcare committee identified that this would require CO detectors in every sleeping unit in hospitals and nursing homes that had a CO source in the building, such as a gas stove or a fireplace, no matter how far away the sleeping rooms were from the CO source. The 2024 IBC/IFC exceptions for CO detectors in the room where the source is located is only for furnaces. This is also a concern for other occupancies, such as jails, dorms or hotels. Since these locations are outside the scope of the Healthcare committee, the Healthcare committee worked with BCAC and FCAC to expand this proposal. The committees will work together next cycle to address this concern in the IBC/IFC.

Since the 2024 IBC/IFC is not yet available, the following 2024 draft is provided to show the concern. F102 -21 had an extensive public comment. The revisions to the current text would read as follows:

CARBON MONOXIDE SOURCE . A piece of commonly used equipment or permanently installed appliance, fireplace or process that produces or emits carbon monoxide gas.

915.1.1 Where required. Carbon monoxide detection shall be installed ~~provided in Group I-1, I-2 and I-4, and R occupancies~~ in the locations specified in Section 915.2 where any of the following conditions ~~in Sections 915.1.2 through 915.1.6~~ exist.

1. In buildings that contain a CO source.
2. In buildings that contain or are supplied by a CO producing forced-air furnace
3. In buildings with attached *private garages*

4. In buildings that have a CO producing vehicle that is used within the building.

915.2 Locations . ~~Where required by Section 915.1.1, carbon~~ Carbon monoxide detection shall be installed in the locations specified in Sections 915.2.1 through 915.2.6 ~~915.2.3.~~

915.2.2 Sleeping units. Carbon monoxide detection shall be installed in *sleeping units*.

Exception: Carbon monoxide detection shall be allowed to be installed outside of each separate sleeping area in the immediate vicinity of the *sleeping unit* where the *sleeping unit* or its attached bathroom does not contain a ~~fuel-burning appliance~~ CO source and is not served by a carbon monoxide producing forced-air furnace.

915.2.4 CO producing forced-air furnace. Carbon monoxide detection, complying with Item 2 of Section 915.1.1 shall be installed in all enclosed rooms and spaces served by a fuel-burning, forced-air furnace.

Exceptions:

1. Where carbon monoxide detector is provided in the first room or space served by each main duct leaving the furnace, and the carbon monoxide alarm signals are transmitted to an approved locations.
2. Dwelling units that comply with Section 915.2.1.

This proposal is submitted by the ICC Building Code Action Committee (BCAC), ICC Fire Code Action Committee (FCAC) and the Committee on Healthcare (CHC)..

BCAC was established by the ICC Board of Directors in July 2011 to pursue opportunities to improve and enhance assigned International Codes or portions thereof. In 2020 and 2021 the BCAC has held several virtual meetings open to any interested party. In addition, there were numerous virtual Working Group meetings for the current code development cycle, which included members of the committee as well as interested parties. Related documents and reports are posted on the BCAC website at https://www.iccsafe.org/products-and-services/i-codes/code-development/cs/building-code-action-committee-bcac/.

The FCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance assigned International Codes with regard to fire and life safety in new and existing buildings and facilities as well as the protection of life and property in wildland urban interface areas. In 2020 and 2021 the Fire-CAC held multiple virtual meetings that were open to any interested party. In addition, there were numerous virtual specific working group meetings that were also open to any interested parties, to develop, discuss and debate the proposed changes. Related documentation and reports are posted on the FCAC website at: https://www.iccsafe.org/products-and-services/i-codes/code-development/cs/fire-code-action-committee-fcac/

The CHC was established by the ICC Board to evaluate and assess contemporary code issues relating to healthcare facilities. This is a joint effort between ICC and the American Society for Healthcare Engineering (ASHE), a subsidiary of the American Hospital Association, to eliminate duplication and conflicts in healthcare regulation. In 2020 and 2021 of the committees as well as any interested parties, to discuss and debate the proposed changes. Information on the CHC, including: meeting agendas; minutes; reports; resource documents; presentations; and all other materials developed in conjunction with the CHC effort can be downloaded from the CHC website at https://www.iccsafe.org/products-and-services/i-codes/code-development/cs/icc-committee-on-healthcare/.

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Cost Impact: The code change proposal will increase the cost of construction

This proposal is merely providing consistency with F102-21 and F116-21 which will in fact increase costs since it now requires CO detection more broadly across more occupancies types based upon the presence of CO sources. Without consistency with the revisions in the IBC and IFC will create confusion and difficulty in enforcement. The exception will help to reduce costs as it will allow the CO source for occupancies that have sleeping units to detect for CO at the source rather than in each sleeping unit or in each corridor in the area of sleeping units.

Public Hearing Results

Committee Action **As Modified**

Committee Modification: 308.1 Carbon monoxide detection. Where an addition, alteration, change of occupancy or relocation of a building is made to an existing building, the existing building shall be provided with carbon monoxide detection in accordance with the International Fire Code or Section R315 of the International Residential Code.

Exceptions:

1. Work involving the exterior surfaces of buildings, such as the replacement of roofing or siding, the addition or replacement of windows or doors, or the addition of porches or decks.
2. Installation, alteration or repairs of plumbing or mechanical systems, other than fuel-burning appliances.
3. Work classified as Level 1 Alterations in accordance with Chapter 7.
4. In Group I-2 Occupancies, carbon ~~Carbon~~ monoxide detection is not required in each sleeping unit where carbon monoxide detection, which transmits an alarm signal to an approved location, is provided in each space containing a carbon monoxide source.

Committee Reason: This proposal is necessary for correlation with the actions taken in Group A for the IFC and IBC (F102-21 and F116-21). The modification reduces the application of the new exception to Group I-2 occupancies where the specific concern for sleeping unit coverage is critical. Applications for other occupancies is somewhat unclear and questions were raised regarding why dwelling units were not included. There were additional concerns with the broader definition of CO sources that will be found in the 2024 IFC and IBC. (Vote: 13-1)

Final Hearing Results

EB32-22 AM

EB33-22

Original Proposal

IEBC: 309.2.1 (New)

Proponents: Philip Oakes, National Association of State Fire Marshals (admin@firemarshals.org)

2021 International Existing Building Code

Add new text as follows:

309.2.1 Automatic sprinkler systems. Combustible exterior wall covering or combustible exterior wall envelopes shall not be added toan existing high-rise buildingthat is not protected throughout with an automatic sprinkler system

Exceptions:

1. Where such material is located on a single story and is less than15 percent of the wall area on any side of the building.
2. Water-resistive barriers installed in accordance with Section 1402.5 of the International Building Code.

Reason: The proposal limits adding a combustible exterior wall covering to an existing high-rise building if the building is not protected with an automatic sprinkler system. It is understood that the IFC requires some existing high-rise buildings to be protected with an automatic sprinkler system. However, where such a requirement has not been enforced or in those instances in which the IFC does not require sprinkler protection in existing buildings, either the wall covering being added should be non-combustible or the building should be protected with an automatic sprinkler protection.

While a good fire test, it is recognized that the NFPA 285 fire test has some limitations. If the combustible exterior wall assembly contributes to fire spread in a high-rise building, the fire service will be challenged to address the fire scenario. Sprinkler protection within the building reduces the likelihood that a combustible exterior wall assembly will become involved in the fire as the result of an interior fire event.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
This proposal will not require a building to be retro-fitted with interior fire sprinklers if exterior wall coverings or envelopes are contemplated, it will simply limit the type of materials to non-combustible types should an interior sprinkler system not be present.

Public Hearing Results

Committee Action **As Submitted**

Committee Reason: The proposal was approved based upon concern for life safety in existing high-rise buildings where combustible cladding is added. The automatic sprinkler system will provide more time for evacuation and will increase life safety. (Vote: 9-5)

Final Hearing Results

EB33-22 AS

EB35-22

Original Proposal

IEBC: 401.2

Proponents: David Bonowitz, David Bonowitz, S.E., FEMA-ATC Seismic Code Support Committee (dbonowitz@att.net); Kelly Cobeen, Wiss Janney Elstner Associates, Federal Emergency Management Agency/Applied Technology Council - Seismic Code Support Committee (kcobeen@wje.com); Michael Mahoney, FEMA, FEMA (mike.mahoney@fema.dhs.gov)

2021 International Existing Building Code

Revise as follows:

401.2 Compliance. The work shall not make the building less complying than it was before the *repair* was undertaken. Work on nondamaged components that is necessary for the required repair of damaged components shall be considered part of the repair and shall not be subject to requirements for alterations.

Reason: This proposal restores a useful provision from the 2015 IEBC Prescriptive and Work Area methods that was lost when repair provisions were consolidated into what is now Chapter 4.
The provision in question was not intentionally deleted when that consolidation was made by EB10-15, whose reason statement does not mention it at all. Rather, it was inadvertently dropped when the EB10-15 proponents selected the Work Area method as the basis for the new Repairs chapter, because that method was more complete in general. The loss of this useful provision came to light only in 2019 when the 2018 IEBC started to be adopted and used.

The clarification that work needed to facilitate repairs should not be considered an alteration project is added to Section 401.2. This provision was previously in 2015 IEBC Sections 404.1 and 502.3, excerpted below for reference. The wording proposed here is essentially identical.

For reference, here is the text of 2015 IEBC Sections 404.1 and 502.3:
404.1 General. Buildings and structures, and parts thereof, shall be repaired in compliance with Sections 401.2 and 404.**Work on nondamaged components that is necessary for the required repair of damaged components shall be considered part of the repair and shall not be subject to the requirements for alterations in this chapter.** Routine maintenance required by Section 401.2 [sic], ordinary repairs exempt from permit in accordance with Section 105.2, and abatement of wear due to normal service conditions shall not be subject to the requirements for repairs in this section.

502.3 Related work. Work on nondamaged components that is necessary for the required repair of damaged components shall be considered part of the repair and shall not be subject to the provisions of Chapter 7, 8, 9, 10, or 11.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
The proposal should not change the cost of any construction because it merely reflects a common understanding that was in the IEBC until it was inadvertently removed in 2018. If anything, the proposal could reduce the cost of some repairs if code officials are interpreting the current code differently.

Public Hearing Results

Committee Action **As Submitted**

Committee Reason: The committee felt that this was a reasonable allowance. Work only being done as a result of a repair should not be considered an alteration. Classifying as an alteration could unnecessarily trigger other code requirements. (Vote: 14-0)

Final Hearing Results

EB35-22 AS

EB38-22

Original Proposal

IEBC: [BS] 405.1

Proponents: David Bonowitz, David Bonowitz, S.E., FEMA-ATC Seismic Code Support Committee (dbonowitz@att.net); Kelly Cobeen, Wiss Janney Elstner Associates, Federal Emergency Management Agency/Applied Technology Council - Seismic Code Support Committee (kcobeen@wje.com); Michael Mahoney, FEMA, FEMA (mike.mahoney@fema.dhs.gov)

THIS CODE CHANGE WILL BE HEARD BY THE IBC-STRUCTURAL CODE COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THAT COMMITTEE.

2021 International Existing Building Code

Revise as follows:

[BS] 405.1 General. Structural damage ~~*repairs*~~ shall be repaired in compliance with this section and Section 401.2.

Reason: This proposal restores a useful provision from the 2015 IEBC Prescriptive and Work Area methods that was lost when repair provisions were consolidated into what is now Chapter 4.
The provision in question was not intentionally deleted when that consolidation was made by EB10-15, whose reason statement does not mention it at all. Rather, it was inadvertently dropped when the EB10-15 proponents selected the Work Area method as the basis for the new Repairs chapter, because that method was more complete in general. The loss of this useful provision came to light only in 2019 when the 2018 IEBC started to be adopted and used.

The wording of Section 405.1 is restored to the wording from 2015 IEBC Section 404.1, excerpted below for reference. This subtle change clarifies that structural damage must actually be repaired. Without it, one could argue that Sections 405.1, 405.2, and 405.2.1 merely *allow* restoring of the pre-damage condition but do not actually require repair unless there's *substantial structural damage*. 2015 Section 404.1 applied generally, but we are proposing this change only to the structural section where the potential confusion is most likely.

For reference, here is the text of 2015 IEBC Section 404.1:

404.1 General. Buildings and structures, and parts thereof, **shall be repaired** in compliance with Sections 401.2 and 404. Work on nondamaged components that is necessary for the required repair of damaged components shall be considered part of the repair and shall not be subject to the requirements for alterations in this chapter. Routine maintenance required by Section 401.2 [sic], ordinary repairs exempt from permit in accordance with Section 105.2, and abatement of wear due to normal service conditions shall not be subject to the requirements for repairs in this section.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
The proposal merely clarifies the existing provision, reflecting the most common interpretation, which was explicit in the IEBC until an inadvertent change in the 2018 edition, which has only been enforced in most jurisdictions for at most two years.

Public Hearing Results

Committee Action **As Submitted**

THIS CODE CHANGE WAS HEARD BY THE IBC-STRUCTURAL COMMITTEE.

Committee Reason: Approved as the language makes the intent of the sections clear by correcting an oversight lost during consolidation of the repair provisions. (Vote: 13-1)

Final Hearing Results

EB38-22 AS

EB39-22

Original Proposal

IEBC: [BS] 405.1, 405.1.1 (New), ACI (New), (New)

Proponents: Stephen Szoke, American Concrete Institute, American Concrete Institute (steve.szoke@concrete.org); Scott Campbell, NRMCA, NRMCA (scampbell@nrmca.org); Peter Barlow, Contech Services, Inc., Contech Services, Inc. (petebarlow@protonmail.com); Gene Stevens, J.R. Harris & Company, J.R. Harris & Company (gene.stevens@jrharrisandco.com); Randy Shackelford, Simpson Strong-Tie Co., Simpson Strong-Tie Co. (rshackelford@strongtie.com); David Whitmore, Vector Corrosion Technologies, Vector Corrosion Technologies (davidw@vector-corrosion.com); Matt Miltenberger, VCS Inc., VCS Inc. (mattm@vcservices.com); Bill Horne, NDT Corporation, NDT Corporation (BHorne@ndtcorporation.com); Dave Tepke, SKA Consulting Engineers, Inc., SKA Consulting Engineers, Inc. (dgtepke@skaeng.com); Jason Coleman, Wiss, Janney, Elstner Associates, International Concrete Repair Institute (jcoleman@wje.com); Dave Fuller, International Concrete Repair Institute, (ICRI), International Concrete Repair Institute, (ICRI) (davef@icri.org); Justin Long, Baltimore-Washington ICRI (justinl@skaengineers.com); Mark DeStefano, DeStefano Engineering Group, ICRI (markd@destefanoengineering.com); Bryan Heery, Everclear Enterprises, Inc., ICRI (bryanh@everclearenterprises.com); Matthew Hansen, Euclid Chemical Company (mhansen@euclidchemical.com); Jim Baker, William Baker Company, Myself (jim@wmbakerco.com); Doug Qualey, Arizona ICRI (dqualey@euclidchemical.com); Mark Meighan, Culberston Restoration, ICRI Delaware Valley (mmeighan@crlpa.com); Jeff Jezzard, Vector Construction, Vector Construction (jeffj@vector-construction.com); Elena Bradway, Aquafin Inc, Aquafin Inc (elena@aquafin.net); Michael Payne, Pittsburgh ICRI (mike.payne@becsmd.com); John Catlett, J.D. Catlett Consulting, LLC, BOMA International (catlettcodeconsulting@gmail.com)

THIS CODE CHANGE WILL BE HEARD BY THE IBC-STRUCTURAL CODE COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THAT COMMITTEE.

2021 International Existing Building Code

[BS] 405.1 General. Structural *repairs* shall be in compliance with this section and Section 401.2.

Add new text as follows:

405.1.1 Structural Concrete. Repair of structural concrete in accordance with ACI 562 Section 1.7 is deemed to comply with Section 405.1, except where Section 405.2.2, 405.2.3 or 405.2.4.1 requires compliance with Section 304.3.

Add new standard(s) as follows:

ACI 562-21. Assessment, Repair, and Rehabilitation of Existing Concrete Structures - Code Requirements

Reason: Concept – This code change proposal adds ACI CODE 562:*Code Requirements for Assessment, Repair, and Rehabilitation of Existing Concrete Structures*, to establish minimum requirements for the evaluation, design, and construction of repairs, and rehabilitation of concrete structural elements in buildings for various levels of desired performance as deemed appropriate for the project. In addition to improved life safety, the requirements clearly define objectives and anticipated project performance for the code official, owners, designers, contractors, and installers. While the proposed language is mandatory, alternative means and methods remain permitted in accordance with Section 104.11 “Alternative materials, design and methods of construction, and equipment.” This addition to the IEBC is also especially important as it includes references to standard specifications for materials used to repair concrete elements that are not addressed elsewhere in the family of International Code Council Codes. Consistent with the language in ACI CODE 562, and the proposed language clearly communicates that use of 562 is not permitted where either the disproportionate earthquake damage (Section 405.2.2), substantial structural damage (Section 405.2.3) or lateral force resisting elements (Section 405.2.4.1) provisions triggered strengthening. Such work would more appropriately be done using ASCE-41 or other similar resources.

Background – In 2006, the repair industry approached ACI asking for a concrete repair and rehabilitation code that would improve the overall quality of concrete repairs by establishing minimum requirements while establishing clear responsibilities between owners,

designers, and contractors to improve public safety. Further, although ACI has made available many guides, manuals, reports and standards on concrete repairs for voluntary use, studies show that the current failure rate of repairs to structural concrete is inconsistent with ACI 562 Committee's views regarding a reasonable level of life safety. The studies [See Hyperlink 1] show that 50 percent of repairs to structural concrete fail within 10 years and 20 percent fail within 5 years. This code provides building code officials with a reference by which to evaluate repairs and rehabilitation of concrete structures.

Scope – ACI 318 provides specific requirements for structural concrete in the International Building Code, similarly, ACI CODE 562 complements the IEBC by providing specific direction on how to evaluate, design and conduct concrete repairs and how to handle the unique construction problems associated with repairs to concrete elements. This standard provides more in-depth requirements needed by most entities addressing the repair of concrete structural elements than is provided in the IEBC. Further, the standard provides the requirements that bridge the inconsistencies and gaps in acceptable criteria that occur from the two following situations that a designer mus solve: 1) repairing a structure according to the original building code used at the time it was built using today's construction methods and materials; or 2) repairing a structure built according to an older building code but repaired according to a more recent building code. ACI CODE 562 includes specifications and requirements for products commonly used for repairs, but not addressed elsewhere in the building codes, including but not limited to fiber-reinforced polymers and polymer concrete.

Benefits – There are many benefits that ACI CODE 562 provides for the designer, owner, contractor, materials providers, building code official and the public. A few of these benefits are:

- **Life Safety**: Provides a level of expectation of life safety to the public in buildings where repairs or rehabilitation is performed on concrete structural elements.
- **Improved Infrastructure**: Many concrete structures are in need of repair and it is crucial that repairs as remedial action for deficiencies in structural elements must be done properly and not simply be cosmetic repairs. This requires minimum levels of evaluation, design, and repair. While not unique to Pittsburgh or parking structures, there is a common theme about the need to properly rehabilitate and repair existing concrete structures.
- **Uniform Requirements**: Provides clearly defined, uniform requirements aimed at extending the service life of existing structures.
- **Quality Repairs**: Provides minimum requirements for efficiency, safety, and quality of concrete repair.
- **Clear Responsibilities**: Establishes clear responsibilities between owners, designers, and contractors.
- **Clear Path for Approval**: Provides building code officials with a means to evaluate rehabilitation designs.
- **Affordable Repairs**: Where appropriate, while helping to ensure an acceptable level of risk, permits specific repair requirements that often result in less costly repairs compared to repairs required to meet requirements for new building construction.
- **Flexibility**: Permits flexibility in evaluation, design, construction and repair materials to provide economies while establishing expected performance for the service-life of the rehabilitation or repairs.
- **Sustainability** - Improve owner, developer, and public confidence regarding effective repairs, upgrades, and reuse of existing buildings in lieu of demolition and replacement (energy, disposal, new materials and construction costs), by appropriately extending the life of existing buildings.
- **Consistent Language**: Several jurisdictions have adopted or are considering adoption of ACI CODE 562. These include but are not limited to Florida, Hawaii, Massachusetts, North Carolina, Ohio, and South Carolina. Inclusion of language in the model building code for existing buildings will improve consistency of language and location of the requirements within the codes of the authorities having jurisdiction adopting ACI CODE 562 by reference.

Resources – Also, there many resources that complement ACI 562. Two ACI documents are provided in the bibliography.

These resources are readily available to provide greater understanding of assessment, repair and rehabilitation of concrete structural elements. ACI MNL-3 provides case studies demonstrating the ease of use of ACI 562. Numerous technical notes, reports, guides, and specifications that provide background information and technical support are available through other organizations, such as American Society of Civil Engineers, British Research Establishment, Concrete Society, International Concrete Repair Institute, National Association of Corrosion Engineers, Post-Tensioning Institute, Society for Protective Coatings, and US Army Corps of Engineers. Many of these organizations' publications related to concrete repair can be found in the Concrete Repair Manual.

Adoptions –

- *2020 Florida Building Code, Existing Buildings, 7th Edition* Section 301.3.4.

· *2018 Hawaii State Building* Code Item (53) Section 3401.6.· *2017 Ohio Building Code with Aug 2018 Updates & Errata 02-08-19* Section 3401.6.

· *2018 North Carolina Existing Building Code* Section 606.1.1.

· City of Los Angeles*California Design Guide Volume 1 City of Los Angeles Mandatory Earthquake Hazard Reduction in Non-Ductile Concrete Buildings (NDC),* including Section 4.1 Retrofit Design Process.

· New York City Department of Buildings cites ACI 562 in*BUILDINGS BULLETIN 2017-015.*

· Design and construction specifications for the City of Austin, Texas Section 410S

Recommendation – ACI, a professional technical society, has developed ACI CODE 562 in response to industry needs and to help assure acceptable minimum levels of life safety, health, and welfare for the public. For this reason and the other benefits identified in this reason statement, ACI recommends this code change proposal for committee approval as submitted.

Hyperlink 1: Studies: https://projects.bre.co.uk/conrepnet/pdf/newsletter3.pdf

Bibliography: ACI 563-18, Specifications for Repair of Structural Concrete in Buildings
MNL-3(16) Guide to the Code for Assessment, Repair, and Rehabilitation of Existing Concrete Structures, ACI and ICRI 2016.

Cost Impact: The code change proposal will decrease the cost of construction
Generally, the use of ACI CODE 562 will reduce the cost of repair, by allowing a level of repair amicable to both the owner and the building code official, while maintaining an acceptable level of safety for occupants. Without this option, often there is a demand to conduct repairs that meet the requirements of the most recent adopted building code for new construction. This standard increases the options available for repair and provides the acceptance criteria necessary to permit these options. A case study that illustrates this point: "ACI CODE 562 has been referenced in expert reports for litigation cases, resulting in significantly reduced financial settlements. Denver-based J. R. Harris & Company recently used the code as a standard in several litigation reports assessing damages in existing concrete structures. As an approved consensus standard, according to American National Standards Institute (ANSI) procedures, ACI CODE 562-13 has been accepted as the source standard to use for damage assessment and repair on individual projects by Greenwood Village and Pikes Peak Regional Building Departments in Colorado. Based on this acceptance, the consulting engineer was able to cite the code in their recommendation for structural remediation and determination of damages. In one case involving rehabilitation work on four buildings with faulty construction, J.R. Harris was able to reduce the repair costs from $12 million to $3 million, with a repair plan based on the lesser of the demand-capacity ratio based on either the original or current building code per ACI 562."

Public Hearing Results

Committee Action **As Submitted**

THIS CODE CHANGE WAS HEARD BY THE IBC-STRUCTURAL COMMITTEE.

Committee Reason: Approved as the updated consensus standard addresses previous committee concerns. The committee did express concerns with the 'deemed to comply' language and that the provided reason statement says 'mandatory'; however, in-person testimony was to the contrary. (Vote: 9-5)

Public Comments

Public Comment 1

Proponents: Jonathan Siu, Jon Siu Consulting, LLC, Washington Association of Building Officials Technical Code Development Committee; Micah Chappell, Seattle Department of Construction and Inspections, Washington Association of Building Officials Technical Code Development Committee (micah.chappell@seattle.gov); Stephen Szoke, American Concrete Institute, American Concrete Institute (steve.szoke@concrete.org) requests As Modified by Public Comment

Modify as follows:

2021 International Existing Building Code

405.1.1 Structural concrete repairs. Repair of structural concrete ~~in accordance~~ shall be permitted to comply with ACI 562 Section 1.7 ~~is deemed to comply with Section 405.1~~, except where Section 405.2.2, 405.2.3 or 405.2.4.1 requires compliance with Section 304.3.

Commenter's Reason: This public comment addresses a comment made by a member of the Structural Committee at the Committee Action Hearings. Specifically, the member had concerns with the "deemed to comply" language in the proposal. This public comment removes the troublesome language, which could be construed as overriding the other provisions in the IEBC despite the language in Section 1.7 of ACI 562. This does not change the intent of the proposal, as use of ACI 562 is still permitted for concrete repairs as long as the repairs are not for seismic purposes.

Cost Impact: The net effect of the Public Comment and code change proposal will decrease the cost of construction
The original cost impact statement says this proposal will decrease the cost of construction. This public comment will have no effect on the original cost impact statement.

Final Hearing Results	
EB39-22	AMPC1

EB41-22

Original Proposal

IEBC: [BS] 405.2.3.1, [BS] 405.2.3.3, [BS] 405.2.4

Proponents: Michael Fillion, National Council of Structural Engineers Associations (mrf.structure@verizon.net)

THIS CODE CHANGE WILL BE HEARD BY THE IBC-STRUCTURAL CODE COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THAT COMMITTEE.

2021 International Existing Building Code

Revise as follows:

[BS] 405.2.3.1 Evaluation. The building shall be evaluated by a registered design professional, and the evaluation findings shall be submitted to the *code official*. The evaluation shall establish whether the damaged building<u>including its foundation</u>, if repaired to its predamage state, would comply with the provisions of the *International Building Code* for load combinations that include wind or earthquake effects, except that the seismic forces shall be the reduced seismic forces.

[BS] 405.2.3.3 Extent of repair for noncompliant buildings. If the evaluation does not establish that the building in its predamage condition complies with the provisions of Section 405.2.3.1, then the building shall be retrofitted to comply with the provisions of this section. <u>The portion of the foundation supporting damaged elements shall be shown to comply with or altered to comply with the provisions of this section.</u> The wind loads for the *repair* and *retrofit* shall be those required by the building code in effect at the time of original construction, unless the damage was caused by wind, in which case the wind loads shall be in accordance with the *International Building Code*. The seismic loads for this *retrofit* design shall be those required by the building code in effect at the time of original construction, but not less than the reduced seismic forces.

[BS] 405.2.4 Substantial structural damage to gravity load-carrying components. Gravity load-carrying components that have sustained *substantial structural damage* shall be rehabilitated to comply with the applicable provisions for dead, live and snow loads in the *International Building Code*. <u>The portion of the foundation supporting damaged elements shall be shown to comply with or altered to comply with the provisions of this section.</u> Undamaged gravity load-carrying components that receive dead, live or snow loads from rehabilitated components shall also be rehabilitated if required to comply with the design loads of the *rehabilitation* design.

Reason: Where structures have been extensively damaged and require repair, the building codes are silent on questions regarding reuse of existing foundations. Just as structural integrity of the superstructure depends on the original design and condition prior to being damaged, so does the structural integrity of the foundation depend on the same.
This proposal requires the affected portion of the foundation system to be included in the scope of the structural evaluation of the building. Just like the superstructure, if the foundation is found to be compliant and undamaged, no upgrades or repairs are required.

It provides a false sense of security in the structural integrity of the building to require the repaired superstructure to conform to current building code requirements if the foundation is unable to transfer the structure reactions at the soil-structure interface.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
This proposal is for clarification.

Public Hearing Results

Committee Action **As Modified**

THIS CODE CHANGE WAS HEARD BY THE IBC-STRUCTURAL COMMITTEE.

Committee Modification: 2021 International Existing Building Code

[BS]405.2.3.3 Extent of repair for noncompliant buildings. If the evaluation does not establish that the building in its predamage condition complies with the provisions of Section 405.2.3.1, then the building, including its foundation, shall be retrofitted to comply with the provisions of this section. ~~The portion of the foundation supporting damaged elements shall be shown to comply with or altered to comply with the provisions of this section.~~ The wind loads for the *repair* and *retrofit* shall be those required by the building code in effect at the time of original construction, unless the damage was caused by wind, in which case the wind loads shall be in accordance with the *International Building Code*. The seismic loads for this *retrofit* design shall be those required by the building code in effect at the time of original construction, but not less than the reduced seismic forces.

[BS]405.2.4 Substantial structural damage to gravity load-carrying components. Gravity load-carrying components that have sustained *substantial structural damage* shall be rehabilitated to comply with the applicable provisions for dead, live and snow loads in the *International Building Code*. ~~The portion of the foundation supporting damaged elements shall be shown to comply with or altered to comply with the provisions of this section.~~ Undamaged gravity load-carrying components, including undamaged foundation components, that receive dead, live or snow loads from rehabilitated components shall also be rehabilitated if required to comply with the design loads of the *rehabilitation* design.

Committee Reason: Approved as modified as the proposal provides needed clarity, regarding the inclusion of the foundation, when interpreting the provisions. The modification provides an clearer way to express the same intent. (Vote: 11-3)

Final Hearing Results

EB41-22 AM

EB42-22

Original Proposal

IEBC: [BS] 405.2.4

Proponents: Gwenyth R. Searer, Wiss, Janney, Elstner Associates, Inc., myself (gsearer@wje.com)

THIS CODE CHANGE WILL BE HEARD BY THE IBC-STRUCTURAL CODE COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THAT COMMITTEE.

2021 International Existing Building Code

Revise as follows:

[BS] 405.2.4 Substantial structural damage to gravity load-carrying components. Gravity load-carrying components that have sustained *substantial structural damage* shall be ~~rehabilitated~~ retrofitted to comply with the applicable provisions for dead, live and snow loads in the *International Building Code*. Undamaged gravity load-carrying components that receive dead, live or snow loads from ~~rehabilitated~~ retrofitted components shall also be ~~rehabilitated~~ retrofitted if required to comply with ~~the~~ these design loads ~~of the *rehabilitation* design~~.

Reason: This is an editorial change intended to replace the use of the all-encompassing terms *rehabilitation* and "rehabilitated" with the more specific terms "retrofit" and "retrofitted" to be consistent with the other sub-sections in Section 405.2.
The term *repair* is defined in Chapter 2 as "The reconstruction, replacement or renewal of any part of an *existing building* for the purpose of its maintenance or to correct damage." The term *addition* is defined as "An extension or increase in floor area, number of stories, or height of a building or structure." And *alteration* is defined as "any construction or renovation to an *existing structure* other than a *repair* or *addition*."

The IEBC goes to some effort to keep the possible categories of actions regarding modification of existing buildings simple: actions are either repairs, additions, or alterations.

Rehabilitation, on the other hand, is defined in Chapter 2 as "Any work, as described by the categories of work defined herein, undertaken in an *existing building*" -- or basically any permitted work done to an existing building. Yet there are only three sections of the IEBC that actually use this term; Sections 104.2.1, 115.5, and 405.2.4.

This proposal only deals with Section 405.2.4. In Section 405.2.4, the word *rehabilitation* (or the related word "rehabilitated") is used as a synonym for "retrofit" or "retrofitted". The other code upgrade triggers in this section use the word "retrofit" and eschew the word "rehabilitation". For example, Section 405.2.3 requires that buildings that exceed this component of substantial structural damage trigger be "repaired and retrofitted", and it contains two exceptions that eliminate the need to "retrofit" in certain circumstances. Similarly, Sections 405.2.3.3 and 405.2.5 also contain the word "retrofitted" and do not use the term "rehabilitation" or "rehabilitate". Even Section 405.2.4.1 and its associated exceptions (which are themselves subparts of Section 405.2.4) only use the word "retrofit" and do not use the term "rehabilitation"..

It is thus clear that the terms *rehabilitation* and "rehabilitated" in Section 405.2.4 are being used as synonyms for "retrofit" or "retrofitted" (or "strengthened") and not in the all-encompassing (and consequently less meaningful) manner of the definition of *rehabilitation*. To provide more consistent wording in all of the structural upgrade trigger provisions in Section 405.2, this proposal replaces the few instances of "rehabilitation" and "rehabilitated" in this section with the more specific terms "retrofit" and "retrofitted."

Cost Impact: The code change proposal will not increase or decrease the cost of construction
This is strictly an editorial change that does not change the scope or reach of the IEBC. Rather, it is intended to replace a general and less specific term with a more specific term that is used in adjacent subsections and even in subsections of the provision in question..

Public Hearing Results

Committee Action **As Submitted**

THIS CODE CHANGE WAS HEARD BY THE IBC-STRUCTURAL COMMITTEE.

Committee Reason: Approved as the term 'retrofit' is preferred to 'rehabilitated' to improve clarity of intent. (Vote: 13-1)

Final Hearing Results

EB42-22 AS

EB43-22

Original Proposal

IEBC: SECTION 406, 406.1, 406.1.1 (New), 406.1.1, 406.1.2, 406.1.3, 406.1.4, 406.1.5

Proponents: Mike Nugent, Chair, Building Code Action Committee (bcac@iccsafe.org)

2021 International Existing Building Code

SECTION 406
ELECTRICAL

Revise as follows:

406.1 ~~Material~~ General. Repairs to existing ~~Existing~~ electrical wiring and equipment ~~undergoing~~ *repair* shall be ~~allowed to be repaired or replaced with like material~~ in accordance with NFPA 70.

Add new text as follows:

406.1.1 Reconditioned Electrical Equipment. Reconditioned electrical equipment shall comply with NFPA 70. Electrical equipment prohibited from being reconditioned by the applicable sections of NFPA 70 shall not be reconditioned.

Delete without substitution:

~~**406.1.1 Receptacles.** Replacement of electrical receptacles shall comply with the applicable requirements of Section 406.4(D) of NFPA 70.~~

~~**406.1.2 Plug fuses.** Plug fuses of the Edison-base type shall be used for replacements only where there is no evidence of over fusing or tampering per applicable requirements of Section 240.51(B) of NFPA 70.~~

~~**406.1.3 Nongrounding-type receptacles.** For replacement of nongrounding-type receptacles with grounding-type receptacles and for branch circuits that do not have an equipment grounding conductor in the branch circuitry, the grounding conductor of a grounding-type receptacle outlet shall be permitted to be grounded to any accessible point on the grounding electrode system or to any accessible point on the grounding electrode conductor in accordance with Section 250.130(C) of NFPA 70.~~

Revise as follows:

~~**406.1.4**~~ **406.1.2 Health care facilities.** Portions of electrical systems being repaired in Group I-2, ambulatory care *facilities* and outpatient clinics shall comply with NFPA 99 requirements for *repairs*.

Delete without substitution:

~~**406.1.5 Grounding of appliances.** Frames of electric ranges, wall-mounted ovens, counter-mounted cooking units, clothes dryers and outlet or junction boxes that are part of the existing branch circuit for these appliances shall be permitted to be grounded to the grounded circuit conductor in accordance with Section 250.140 of NFPA 70.~~

Reason: The 2020 National Electrical Code (NEC) was revised to include requirements for reconditioned electrical equipment. Numerous sections were added to identify whether a specific piece of electrical equipment was suitable to be reconditioned. Not all electrical equipment is suitable to be reconditioned, rebuilt or remanufactured due to its design features or critical role in electrical safety. For example, a molded case circuit breaker by design is not able to be opened and reconditioned. Molded case circuit breakers that are subjected to flood or fire damage can't be reconditioned and must be replaced. The 2020 NEC includes requirements for specific equipment

that cannot be reconditioned, such as molded case circuit breakers.
This proposal is intended to update the requirements in the IEBC to match that of the current edition of NFPA 70 the NEC. Section 406.1 was modified to include a reference to NFPA 70 for reconditioning. A new section 406.1.1 was added to clarify what equipment can be reconditioned and to identify the requirements that reconditioned electrical equipment be specifically marked in accordance with Section 110.21(A)(2) of NFPA 70.

The existing Sections 406.1.1, 406.1.2, 406.1.3 and 406.1.5 were deleted since these sections were repeats of requirements found in NFPA 70. There are differences between the requirements as written in the 2020 NEC and the existing sections in the IEBC. The requirements found in the sections are best left in NFPA 70. Additionally, the existing Section 406.1.4 was renumbered to 406.1.2 and left since this section references NFPA 99 for health care facilities.

This proposal is submitted by the ICC Building Code Action Committee (BCAC). BCAC was established by the ICC Board of Directors in July 2011 to pursue opportunities to improve and enhance assigned International Codes or portions thereof. In 2020 and 2021 the BCAC has held several virtual meetings open to any interested party. In addition, there were numerous virtual Working Group meetings for the current code development cycle, which included members of the committee as well as interested parties. Related documents and reports are posted on the BCAC website at https://www.iccsafe.org/products-and-services/i-codes/code-development/cs/building-code-action-committee-bcac/.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
This proposal will provide direction to the appropriate existing requirements for repair and reconditioning of electrical systems. The current provisions were not aligned with NFPA 70. These revisions simply makes the requirements consistent for enforcement and will not increase costs.

Public Hearing Results

Committee Action **As Modified**

Committee Modification:
406.1.1 Reconditioned Electrical Equipment. Reconditioned electrical equipment shall comply with NFPA 70. Electrical equipment prohibited from being reconditioned by the applicable sections of NFPA 70 shall not be reconditioned, unless permitted by NFPA 99.

Committee Reason: This proposal was approved as it aligns the requirements related to repairs and reconditioning with NFPA 70. There was some concern that Section 604.3 of the IPMC needs to be updated in the future to be consistent. The modification includes a specific reference to NFPA 99 since the reference under the repair language will not apply to reconditioning within healthcare occupancies. (Vote: 14-0)

Final Hearing Results

EB43-22 AM

EB44-22

Original Proposal

IEBC: 502.1, 503.1

Proponents: Michael Fillion, National Council of Structural Engineers Associations (mrf.structure@verizon.net)

2021 International Existing Building Code

Revise as follows:

502.1 General. *Additions* to any building or structure shall comply with the requirements of the *International Building Code* for new construction. *Alterations* to the *existing building* or structure shall be made to ensure that the *existing building* or structure together with the *addition* are not less complying with the provisions of the *International Building Code* than the *existing building* or structure was prior to the *addition*, unless explicitly permitted elsewhere in this section. An *existing building* together with its *additions* shall comply with the height and area provisions of Chapter 5 of the International Building Code.

503.1 General. *Alterations* to any building or structure shall comply with the requirements of the *International Building Code* for new construction. *Alterations* shall be such that the *existing building* or structure is not less complying with the provisions of the *International Building Code* than the *existing building* or structure was prior to the *alteration,* unless explicitly permitted elsewhere in this section.

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Reason: Clarifies requirements for structural alterations based on 2018 SEAOC survey. Reference Survey Question 4, associated results, and discussion in the attached conference paper (Zepeda et al, 2019). Code is not clear on how to evaluate whether the building is considered “less complying.”

Revisions made by this proposal intend to clarify that the triggers for requiring structural upgrades are as defined in these sections for additions and alterations, with applicable exceptions, and that this statement is not the a trigger in itself.

https://www.cdpaccess.com/proposal/8703/25651/files/download/3153/

Bibliography: Zepeda, D., Hagen, G., O'Connell, K., McLellan, R., Buckalew, J., and Sumer, A., "Existing Buildings and the "10% Rule": Survey Results, Opinions, and Recommendations." 2019 SEAOC Convention Proceedings (pp. 116-147), Sacramento, CA: Structural Engineers Association of California.

Cost Impact: The code change proposal will not increase or decrease the cost of construction

The intent of this code change proposal is for clarification. As it does not change the intent of the code, it will not increase of decrease the cost of construction.

Public Hearing Results

Committee Action **As Modified**

Committee Modification:

502.1 General. *Additions* to any building or structure shall comply with the requirements of the *International Building Code* for new construction. *Alterations* to the *existing building* or structure shall be made to ensure that the *existing building* or structure together with the *addition* are not less complying with the provisions of the *International Building Code* than the *existing building* or structure was prior to the *addition*, ~~unless explicitly permitted elsewhere in this section~~ except that the structural elements need only comply with Sections 502.2 through 502.5. An *existing building* together with its *additions* shall comply with the height and area provisions of Chapter 5 of the International Building Code.

503.1 General. *Alterations* to any building or structure shall comply with the requirements of the *International Building Code* for new construction. *Alterations* shall be such that the *existing building* or structure is not less complying with the provisions of the *International Building Code* than the *existing building* or structure was prior to the *alteration,* ~~unless explicitly permitted elsewhere in this section~~ except that the structural elements need only comply with Sections 503.2 through 503.12.

Committee Reason: The new language clarifies that the structural provisions of the IEBC intentionally do not always require full compliance with the IBC. The modification simply provides more specific direction that the intention was only related to structural requirements. The initial proposal included broader language that could be interpreted to apply to other aspects of a building. (Vote: 10-4)

Final Hearing Results

EB44-22 AM

EB45-22

Original Proposal

IEBC: 502.1, 1102.2, 1102.3, 1301.2.3

Proponents: Daniel Nichols, MTA Construction and Development, MTA Construction and Development (dnichols@mnr.org)

2021 International Existing Building Code

Revise as follows:

502.1 General. *Additions* to any building or structure shall comply with the requirements of the *International Building Code* for new construction. *Alterations* to the *existing building* or structure shall be made to ensure that the *existing building* or structure together with the *addition* are not less complying with the provisions of the *International Building Code* than the *existing building* or structure was prior to the *addition*. An *existing building* together with its *additions* shall comply with the height and area provisions of Chapter 5 of the International Building Code.

Exception: Where an addition is an exit or exit access stairway or to provide an accessible route, the addition shall not be considered an area increase for compliance with this section.

1102.2 Area limitations. An *addition* shall not increase the area of an *existing building* beyond that permitted under the applicable provisions of Chapter 5 of the International Building Code for new buildings unless fire separation as required by the *International Building Code* is provided.

~~**Exception**~~ **Exceptions:**

1. In-filling of floor openings and nonoccupiable appendages such as elevator and exit stairway shafts shall be permitted beyond that permitted by the International Building Code.
2. Where an addition is an exit or exit access stairway or to provide an accessible route, the addition shall not be considered an area increase for compliance with this section.

1102.3 Fire protection systems. Existing fire areas increased by the *addition* shall comply with Chapter 9 of the International Building Code.

Exception: Where an addition is an exit or exit access stairway or to provide an accessible route, the addition shall not be considered an area increase for compliance with this section.

1301.2.3 Additions. *Additions* to *existing buildings* shall comply with the requirements of the *International Building Code* or the *International Residential Code* for new construction. The combined height and area of the *existing building* and the new *addition* shall not exceed the height and area allowed by Chapter 5 of the International Building Code. Where a fire wall that complies with Section 706 of the International Building Code is provided between the *addition* and the *existing building*, the *addition* shall be considered a separate building.

Exception: Where an addition is an exit or exit access stairway or to provide an accessible route, the addition shall not be considered an area increase for compliance with this section.

Reason: Due to constraints within an existing building footprint, many buildings that wish to add vertical circulation methods to provide accessibility to upper or lower levels need to create an "addition" to the existing building. In doing so, the addition of an elevator shaft attached to the exterior wall, the placement of a covered ramp, or the addition of an exterior stairway with a roof will usually trigger an evaluation of building areas and fire protection systems within existing fire areas. The general addition areas of these locations can be in the 100-300 sf per story for a single cab elevator, or run of a covered ramp.. Because of the definition of a building area and fire areas being modified over the past few IBC and IFC development cycles (see projection requirements for "area, building" and "fire area" in IBC Section 202 , these specialized additions are now considered the same as an addition looking to increase occupiable floor area.
Regarding building area- Width the limited space that an elevator, stairway, or ramp takes in regards to building area, the increase in nonconformance is minimal. The most nonconforming situation that could be realized is no greater than 10% (existing 3 story

nonsprinklered group R Type 5B). However, the addition of an elevator doesn't completely increase the occupiable or usable floor area of a story in the same way fire flows and fire suppression methods have been evaluated to determine building area sizing for over a century. This was also previously supported by the "125% increase" that was found in the base "rehab" codes regarding area increases for additions.

Fundamentally, the addition of a stairway or ramp is always a benefit from upper levels for egress purposes. The placement of a covering to protect against the weather (or excavation if you are underground) should not be the trigger for an evaluation of the building area and all fire protection systems. Additionally, these types of additions also require an accessible means of egress to be provided which greatly increases the safety and (sometimes) requires additional fire separations or automatic sprinklers to meet AMOE requirements.

Since this code change proposal is an exception to building area and fire area requirements, a change has been placed in all three compliance method sections to ensure consistency of accessibility upgrades. It was felt it is not appropriate for code users to place in the all-accessibility section IEBC Section 306, but would take direction from the committee if so desired.

Cost Impact: The code change proposal will decrease the cost of construction
The removal of building area and fire area consideration from accessible route upgrades will decrease the cost of construction. Currently in the metropolitan NYC area, the installation in an existing rail station of a two stop elevator from street level to one level below grade (excavation, elevator installation, space reconfiguration, EMR placement, MEP work, and com work) is an average of $16M. To continue to outfit an existing rail station with an automatic sprinkler system is an additional $2.234M for the first 5,000 sf of fire area. As an example of the savings, this code change proposal will decrease the cost of elevator projects by a minimum of 13.9% and does not include greater coverage areas, smoke detection requirements, and upgrades to construction due to building area increases.

Public Hearing Results

Committee Action **As Modified**

Committee Modification:

502.1 General. *Additions* to any building or structure shall comply with the requirements of the *International Building Code* for new construction. *Alterations* to the *existing building* or structure shall be made to ensure that the *existing building* or structure together with the *addition* are not less complying with the provisions of the *International Building Code* than the *existing building* or structure was prior to the *addition*. An *existing building* together with its *additions* shall comply with the height and area provisions of Chapter 5 of the International Building Code.

Exception: In-filling of floor openings and nonoccupiable appendages such as elevator and exit stairway shafts shall be permitted beyond that permitted by the International Building Code.~~Where an addition is an exit or exit access stairway or to provide an accessible route, the addition shall not be considered an area increase for compliance with this section.~~

1102.2 Area limitations. An *addition* shall not increase the area of an *existing building* beyond that permitted under the applicable provisions of Chapter 5 of the International Building Code for new buildings unless fire separation as required by the *International Building Code* is provided.

Exceptions:

1. In-filling of floor openings and nonoccupiable appendages such as elevator and exit stairway shafts shall be permitted beyond that permitted by the International Building Code.
2. ~~Where an addition is an exit or exit access stairway or to provide an accessible route, the addition shall not be considered an area increase for compliance with this section.~~

1102.3 Fire protection systems. Existing fire areas increased by the *addition* shall comply with Chapter 9 of the International Building Code.

Exception: In-filling of floor openings and nonoccupiable appendages such as elevator and exit stairway shafts shall be permitted beyond that permitted by the International Building Code.~~Where an addition is an exit or exit access stairway or to provide an accessible~~

~~route, the addition shall not be considered an area increase for compliance with this section.~~

1301.2.3 Additions. *Additions* to *existing buildings* shall comply with the requirements of the *International Building Code* or the *International Residential Code* for new construction. The combined height and area of the *existing building* and the new *addition* shall not exceed the height and area allowed by Chapter 5 of the International Building Code. Where a fire wall that complies with Section 706 of the International Building Code is provided between the *addition* and the *existing building*, the *addition* shall be considered a separate building.

Exception: In-filling of floor openings and nonoccupiable appendages such as elevator and exit stairway shafts shall be permitted beyond that permitted by the International Building Code.~~Where an addition is an exit or exit access stairway or to provide an accessible route, the addition shall not be considered an area increase for compliance with this section.~~

Committee Reason: This approval clarifies that a designer or owner should not be penalized for additional building area when adding egress or increasing accessibility. The modification simply uses existing exception language from Section 1102.2 to replace the proposed language. That wording already allows infilling for elevators and exit stairways to permit the addition of more exiting and accessibility withou contributing to building area. (Vote: 14-0)

Public Comments

Public Comment 1

Proponents: Daniel Nichols, MTA Construction and Development, MTA Construction and Development (dnichols@mnr.org) requests As Modified by Public Comment

Further modify as follows:

2021 International Existing Building Code

1102.3 Fire protection systems. Existing fire areas increased by the *addition* shall comply with Chapter 9 of the International Building Code.

Exception: ~~In-filling of floor openings and nonoccupiable~~Nonoccupiable appendages such as elevator and exit stairway shafts shall be permitted beyond that permitted by the International Building Code.

Commenter's Reason: This public comment is to address an unintended exemption as is applies to fire protection systems. The application of 1102.3 for fire protection systems is different than the height and area increases that are in the changes for the 3 compliance methods. The public comment removes the general in-filling of floor openings since this could create a substantial increase in fire area and/or occupant loading without any limitations. However, it does keep the elevator and stairway addition exception that were substantiated by the original reason statement and supported by the committee.

Cost Impact: The net effect of the Public Comment and code change proposal will decrease the cost of construction
This public comment maintains the same cost savings listed in the original code change proposal.

Final Hearing Results

EB45-22 AMPC1

EB46-22

Original Proposal

IEBC: 502.1, CHAPTER 11, SECTION 1101, 1101.1, 1101.2, 1101.3, 1101.4, 1101.5 (New), 1301.2.3

Proponents: Stephen Thomas, Shums Coda Associates, Self (sthomas@coloradocode.net)

2021 International Existing Building Code

Revise as follows:

502.1 General. *Additions* to any building or structure shall comply with the requirements of the *International Building Code* for new construction. *Alterations* to the *existing building* or structure shall be made to ensure that the *existing building* or structure together with the *addition* are not less complying with the provisions of the *International Building Code* than the *existing building* or structure was prior to the *addition*. An *existing building* together with its *additions* shall comply with the height and area provisions of Chapter 5 of the International Building Code.
Where a new occupiable roof is added to a building or structure, the occupiable roof shall comply with the provisions of the International Building Code.

CHAPTER 11 ADDITIONS

SECTION 1101
GENERAL

1101.1 Scope. An *addition* to a building or structure shall comply with the International Codes as adopted for new construction without requiring the *existing building* or structure to comply with any requirements of those codes or of these provisions, except as required by this chapter. Where an *addition* impacts the *existing building* or structure, that portion shall comply with this code.

1101.2 Creation or extension of nonconformity. An *addition* shall not create or extend any nonconformity in the *existing building* to which the *addition* is being made with regard to accessibility, structural strength, fire safety, means of egress or the capacity of mechanical, plumbing or electrical systems.

1101.3 Other work. Any *repair* or *alteration* work within an *existing building* to which an *addition* is being made shall comply with the applicable requirements for the work as classified in Chapter 6.

1101.4 Enhanced classroom acoustics. In Group E occupancies, enhanced classroom acoustics shall be provided in all classrooms in the *addition* with a volume of 20,000 cubic feet (565 m^3) or less. Enhanced classroom acoustics shall comply with the reverberation time in Section 808 of ICC A117.1.

Add new text as follows:

1101.5 Occupiable Roofs. Where a new occupiable roof is added to a building or structure, the occupiable roof shall comply with the provisions of the International Building Code.

Revise as follows:

1301.2.3 Additions. *Additions* to *existing buildings* shall comply with the requirements of the *International Building Code* or the *International Residential Code* for new construction. The combined height and area of the *existing building* and the new *addition* shall not exceed the height and area allowed by Chapter 5 of the International Building Code. Where a fire wall that complies with Section 706 of the International Building Code is provided between the *addition* and the *existing building*, the *addition* shall be considered a separate building.

Where a new occupiable roof is added to a building or structure, the occupiable roof shall comply with the provisions of the International Building Code.

Reason: The purpose of this proposed language is to provide guidance to the use of the code as to what is required when an occupiable roof is added to a building. The proposal would confirm that the occupiable roof will need to comply with the provisions of the International Building Code. This could include the means of egress, accessibility and live load requirements. Many roofs are not designed to support the loads imposed when an occupiable roof is added to a building. This would require that the structure be upgraded to support the additional loads, that a means of egress is provided in accordance with Chapter 10 of the IBC and that an accessible route be provided if one is required by Chapter 11 of the IBC, to just name a few requirements.
The new language has been added to each of the three different options for compliance. The definition of an addition is "An extension or increase in floor area, number of stories, or height of a building or structure". I would argue that the new occupiable roof is an increase in the floor area. It is not an increase in building area, but is increasing the floor area for the purpose egress and accessibility.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
The intent of this proposal is to clarify that a new occupiable roof must comply with the provisions of the building code. The requirements are essentially already in the code, but this change clarifies the requirement.

Public Hearing Results

Committee Action **As Submitted**

Committee Reason: There was concern that without this proposed language occupiable roofs can create significant life safety and emergency responder safety hazards. Occupiable roofs can have significant occupant loads as they are often assembly occupancies. This proposal prevents an owner from constructing a building that is not initially classified as a high-rise then once occupied adding an occupiable roof with a high occupant load, which based upon the requirements of the 2024 IBC, would be considered a high-rise building. (Vote: 10-4)

Final Hearing Results

EB46-22 AS

EB47-22

Original Proposal

IEBC: 502.1.1 (New), 1101.3 (New)

Proponents: David Bonowitz, David Bonowitz, S.E., FEMA-ATC Seismic Code Support Committee (dbonowitz@att.net); Kelly Cobeen, Wiss Janney Elstner Associates, Federal Emergency Management Agency/Applied Technology Council - Seismic Code Support Committee (kcobeen@wje.com); Michael Mahoney, FEMA, FEMA (mike.mahoney@fema.dhs.gov)

THIS CODE CHANGE WILL BE HEARD BY THE IBC-STRUCTURAL CODE COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THAT COMMITTEE.

2021 International Existing Building Code

Add new text as follows:

502.1.1 Risk category assignment. Where the addition and the existing building have different occupancies, the risk category of each existing and added occupancy shall be determined in accordance with Section 1604.5.1 of the *International Building Code*. Where application of that section results in a higher risk category for the existing building, such a change shall be considered a change of occupancy and shall comply with Section 506 of this code. Where application of that section results in a higher risk category for the addition, the addition and any systems in the existing building required to serve the addition shall comply with the requirements of the *International Building Code* for new construction for the higher risk category.

1101.3 Risk category assignment. Where the addition and the existing building have different occupancies, the risk category of each existing and added occupancy shall be determined in accordance with Section 1604.5.1 of the *International Building Code*. Where application of that section results in a higher risk category for the existing building, such a change shall be considered a change of occupancy and shall comply with Section 506 of this code. Where application of that section results in a higher risk category for the addition, the addition and any systems in the existing building required to serve the addition shall comply with the requirements of the *International Building Code* for new construction for the higher risk category.

Reason: This proposal clarifies how risk category should be assigned where the addition and the existing building have different uses. It creates identical provisions in the Prescriptive and Work Area methods.
IBC Section 1604.5.1 already covers conditions like this for new buildings. Generally, IEBC users would use IBC Section 1604.5 to find the risk category where any IEBC provision calls for it, but there is no general IEBC provision that explicitly points there. The case of additions, where the IEBC already requires the addition to be designed and built as new construction, is of particular interest, so this proposal provides a common sense interpretation.

As background and precedent, it is worth noting the other cases where the current codes address mismatched uses:

- IEBC Section 302.5 points to IBC Chapter 3 to assign occupancies, and Chapter 3 points in turn to Section 508 for buildings with mixed occupancies.
- IEBC Section 304.3 points to IBC Section 1604.5 to assign risk categories, and Section 1604.5.1 addresses mixed use buildings, requiring each portion of a new building to be assigned to the highest risk category of any portion on which it is structurally or functionally dependent. This proposal creates new IEBC sections to make that reference more direct and explicit for the case of additions.
- IEBC Section 1101.2 prohibits deficiencies in existing buildings from being extended into additions. (We are separately proposing a similar provision for the Prescriptive method.)
- IEBC Sections 506.5.4 and 1006.4 address operational access to RC IV facilities that might be affected by a change of occupancy project, but there is no similar provision for additions. This proposal would address that situation in a different way, by acknowledging that a dependent addition to a RC IV building must itself be assigned to RC IV, and that a RC IV addition changes the occupancy of a dependent non-RC IV existing building.

Cost Impact: The code change proposal will not increase or decrease the cost of construction

The proposal merely provides a more explicit interpretation of the current code for the special case of additions.

Public Hearing Results

Committee Action **As Modified**

THIS CODE CHANGE WAS HEARD BY THE IBC-STRUCTURAL COMMITTEE.

Committee Modification: 2021 International Existing Building Code

1101.3 Risk category assignment. Where the addition and the existing building have different occupancies, the risk category of each existing and added occupancy shall be determined in accordance with Section 1604.5.1 of the *International Building Code*. Where application of that section results in a higher risk category for the existing building, such a change shall be considered a change of occupancy and shall comply with ~~Section 506~~ Chapter 10 of this code. Where application of that section results in a higher risk category for the addition, the addition and any systems in the existing building required to serve the addition shall comply with the requirements of the *International Building Code* for new construction for the higher risk category.

Committee Reason: Approved as modified as this provides consistency between the IEBC and the IBC for Risk Category assignments. The modification correctly adds a pointer to Chapter 10. (Vote: 14-0)

Public Comments

Public Comment 1

Proponents: Jonathan Siu, Jon Siu Consulting, LLC, Self requests As Modified by Public Comment

Further modify as follows:

2021 International Existing Building Code

502.1.1 Risk category assignment. Where the addition and the existing building have different occupancies, the risk category of each existing and added occupancy shall be determined in accordance with Section 1604.5.1 of the *International Building Code*. Where application of that section results in a higher risk category for the existing building compared with the risk category for the existing building before the addition, such a change shall be considered a change of occupancy and shall comply with Section 506 of this code. Where application of that section results in a higher risk category for the addition compared with the risk category for the addition by itself, the addition and any systems in the existing building required to serve the addition shall comply with the requirements of the *International Building Code* for new construction for the higher risk category.

1101.3 Risk category assignment. Where the addition and the existing building have different occupancies, the risk category of each existing and added occupancy shall be determined in accordance with Section 1604.5.1 of the *International Building Code*. Where application of that section results in a higher risk category for the existing building compared with the risk category for the existing building before the addition, such a change shall be considered a change of occupancy and shall comply with Chapter 10 of this code. Where application of that section results in a higher risk category for the addition compared with the risk category for the addition by itself, the addition and any systems in the existing building required to serve the addition shall comply with the requirements of the *International Building Code* for new construction for the higher risk category.

Commenter's Reason: This public comment is being submitted to clarify the application of the proposed change, in response to comments from a Structural Committee member at the Committee Action Hearings. As submitted, the text of the code will address changes to "a higher risk category," but does not establish any baseline for comparison. This begs the question, "higher than what?"
The intent of the second sentence in both sections in the code change is that if Section 1604.5.1 triggers a change to the existing portion of

the building, either with or without the addition taken into consideration, the provisions for change of occupancy get applied to the existing portion of the building.

Similarly, the third sentence in both sections is intended to trigger compliance with the IBC for new construction in the addition should Section 1604.5.1 trigger a change to the risk category for the addition. This sentence also triggers changes within the existing portion of the building, should the existing portion and the addition share building systems (sprinklers, fire alarms, mechanical systems, etc.)

This public comment establishes the baselines for comparison as follows:

- For the existing portion of the building, the "end-result" risk category gets compared to the risk category of the building before the addition was proposed. If Section 1604.5.1 requires the risk category to be higher than it was previous to the addition, the existing portion of the building is subject to the change of occupancy provisions.
- For the addition, the "end-result" risk category gets compared to the risk category of the addition if it were a standalone or separated portion of the building. Again, if Section 1604.5.1 triggers the risk category of the addition to be higher than would ordinarily be required, the addition must comply with new construction requirements for the higher risk category. If any building systems are shared between the addition and the existing portion of the building, the existing building will be required to be upgraded to meet the requirements for new construction for the higher risk category as well.

Cost Impact: The net effect of the Public Comment and code change proposal will not increase or decrease the cost of construction
The cost impact statement for the original proposal says there will be no change to the cost of construction, since it is merely a clarification of what is required by the existing code language. Given that this public comment is a further clarification of the original code change, it will have no effect on the original cost impact statement.

Final Hearing Results

EB47-22 AMPC1

EB48-22

Original Proposal

IEBC: 502.1.1 (New), 1101.2

Proponents: David Bonowitz, David Bonowitz, S.E., FEMA-ATC Seismic Code Support Committee (dbonowitz@att.net); Kelly Cobeen, Wiss Janney Elstner Associates, Federal Emergency Management Agency/Applied Technology Council - Seismic Code Support Committee (kcobeen@wje.com); Michael Mahoney, FEMA, FEMA (mike.mahoney@fema.dhs.gov)

2021 International Existing Building Code

Add new text as follows:

502.1.1 Creation or extension of nonconformity. An *addition* shall not create or extend any nonconformity in the *existing building* to which the *addition* is being made with regard to accessibility, structural strength, supports and attachments for nonstructural components, fire safety, means of egress or the capacity of mechanical, plumbing or electrical systems.

Exception: Nonconforming supports and attachments for nonstructural components that serve the addition from within the *existing building* need not be altered to comply with *International Building Code* Section 1613 unless the components are part of the addition's *life safety system* or are required to serve an *addition* assigned to Risk Category IV.

Revise as follows:

1101.2 Creation or extension of nonconformity. An *addition* shall not create or extend any nonconformity in the *existing building* to which the *addition* is being made with regard to accessibility, structural strength, supports and attachments for nonstructural components, fire safety, means of egress or the capacity of mechanical, plumbing or electrical systems.

Exception: Nonconforming supports and attachments for nonstructural components that serve the addition from within the *existing building* need not be altered to comply with *International Building Code* Section 1613 unless the components are part of the addition's *life safety system* or are required to serve an *addition* assigned to Risk Category IV.

Reason: This proposal clarifies the current intent of the IEBC for cases where an addition relies on the existing building for certain systems or services – or vice versa.

The code already requires that any addition should itself be designed and built as new construction. This proposal ensures that the new addition is provided with suitable support from the existing building, consistent with the code's current intent. Examples:

- An addition might get its hot water from mechanical systems in the existing building, or might rely on a stair tower in the existing building for egress. In these cases, the addition is new and ought to have mechanical systems and egress capacity that are like new as well.
- A horizontal addition will include an elevator and new HVAC equipment meant to serve both the addition and the existing building. If the existing building is assigned to Risk Category IV, then the new systems should meet requirements for RC IV buildings even if the addition itself contains only RC II uses.

We believe this is the current intent of the code, and the Work Area method Sec 1101.2 already captures this intent for critical systems -- accessibility, structural strength, fire safety, egress, and MEP systems. Section 1101.2 sensibly requires that if the addition must be built as new construction, we wouldn't allow it to be built with deficient systems as a standalone structure, so why would we allow it to be served with deficient systems just because they're in an adjacent existing building?

But the current provision is not quite clear about bracing (especially seismic) of nonstructural components. Some might read "structural strength" to include "supports and attachments for nonstructural components" since the latter are covered in IBC Chapter 16. Some might consider the current reference to MEP systems to include their bracing and support. Nevertheless, the code is not as clear as it could be regarding this issue, so this proposal clarifies it.

Why the new exception? Despite what we believe is a laudable intent, we also recognize that the reason these items get overlooked is that

it can be expensive to expose, evaluate, and retrofit nonstructural systems (even those already included in the list under fire safety, egress, and MEP). So the proposal adds an exception that effectively requires retrofit only for those systems serving RC IV additions where post-earthquake functionality is inherent in the design assumptions. Similarly, *life safety systems* must be functional in the addition, so they are not eligible for the exception either. The exception refers to IBC Section 1613 because that would be the default criteria if the exception were not provided, as indicated by Section 1101.1 (not shown) or by Section 502.1 (not shown) for the Prescriptive method.

Thus, depending on how one interprets the current code, this proposal is either an extension of the requirement in current Section 1101.2, or a relaxation of it through an exception. Either way, we submit that this proposal finds the right balance and should be in both the Work Area and Prescriptive methods. Therefore, in addition to revising Sec 1101.2, this proposal copies it into the Prescriptive method, where it will clarify the similar but implicit requirement in the first sentence of Section 502.1.

Finally, it's worth observing that if you don't want to retrofit existing systems, there's an easy way out. Just design your addition to be structurally and functionally separate from the existing building, as IBC Section 1605.4.1 and IEBC Section 1101.2 both allow. Thus, neither the current code nor this proposal actually mandates any upgrade to the existing building for an independent addition. But *without* this proposal, the incentive is to save money on the addition by relying on deficient systems in the existing building, or by having it serve the RC IV existing building while being designed itself as RC II. This proposal removes those perverse incentives.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
The proposal should not increase the cost of construction because it merely clarifies the intent of the current code, especially Section 1101.2, which prohibits the creation or extension of a deficient building system within an existing building when an addition is made. In some cases, depending on how the current code is interpreted, the proposed new Exception might actually reduce the cost of an addition.

Public Hearing Results

Committee Action **As Submitted**

Committee Reason: This proposal provides the necessary guidance as to what aspects of the existing building would need to be upgraded when an addition is made to the building. (Vote: 13-0)

Final Hearing Results

EB48-22 AS

EB50-22

Original Proposal

IEBC: SECTION 202 (New), [BS] 502.3, [BS] 1103.3, [BS] 1301.3.3

Proponents: Gregory Wilson, Federal Emergency Management Agency, FEMA (gregory.wilson2@fema.dhs.gov); Rebecca Quinn, RCQuinn Consulting, Inc., DHS Federal Emergency Management Agency (rcquinn@earthlink.net)

THIS CODE CHANGE WILL BE HEARD BY THE IBC-STRUCTURAL CODE COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THAT COMMITTEE.

2021 International Existing Building Code

Add new definition as follows:

LOWEST FLOOR. The lowest floor of the lowest enclosed area, including basement, but excluding any unfinished or flood-resistant enclosure, usable solely for vehicle parking, building access or limited storage provided that such enclosure is not built so as to render the structure in violation of Section 1612 of the International Building Code or Section R322 of the International Residential Code, as applicable.

Revise as follows:

[BS] 502.3 Flood hazard areas. For buildings and structures in *flood hazard* areas established in Section 1612.3 of the International Building Code, or Section R322 of the International Residential Code, as applicable, any *addition* that constitutes *substantial improvement* of the *existing structure* shall comply with the flood design requirements for new construction, and all aspects of the *existing structure* shall be brought into compliance with the requirements for new construction for flood design.

For buildings and structures in *flood hazard areas* established in Section 1612.3 of the International Building Code, or Section R322 of the International Residential Code, as applicable, any *additions* that do not constitute *substantial improvement* of the *existing structure* are not required to comply with the flood design requirements for new construction provided that both of the following apply:

1. The addition shall not create or extend a nonconformity of the existing building or structure with the flood resistant construction requirements than the existing building or structure was prior to the addition
2. The lowest floor of the addition shall be at or above the lower of the lowest floor of the existing building or structure or the lowest floor elevation required in Section 1612 of the International Building Code, or Section R322 of the International Residential Code, as applicable.

[BS] 1103.3 Flood hazard areas. *Additions* and *foundations* in *flood hazard areas* shall comply with the following requirements:

1. For horizontal *additions* that are structurally interconnected to the *existing building*:
   1.1. If the *addition* and all other proposed work, when combined, constitutes *substantial improvement*, the *existing building* and the *addition* shall comply with Section 1612 of the *International Building Code*, or Section R322 of the International Residential Code, as applicable.

   1.2. If the *addition* constitutes *substantial improvement*, the *existing building* and the *addition* shall comply with Section 1612 of the International Building Code, or Section R322 of the International Residential Code, as applicable.

   1.3 If the addition does not constitute substantial improvement the existing structure is not required to comply with the flood design requirements for new construction provided that both of the following apply.
      1.3.1 The addition shall not create or extend any nonconformity of the existing building with the flood resistant construction requirements.

      1.3.2 The lowest floor of the addition shall be at or above the lower of the lowest floor of the existing building or the lowest floor elevation required in Section 1612 of the International Building Code, or Section R322 of the International Residential Code, as applicable.

2. For horizontal *additions* that are not structurally interconnected to the *existing building*:
   2.1. The *addition* shall comply with Section 1612 of the International Building Code, or Section R322 of the International Residential Code, as applicable.

   2.2. If the *addition* and all other proposed work, when combined, constitutes *substantial improvement*, the *existing building* and the *addition* shall comply with Section 1612 of the International Building Code, or Section R322 of the International Residential Code, as applicable.

3. For vertical *additions* and all other proposed work that, when combined, constitutes *substantial improvement*, the *existing building* shall comply with Section 1612 of the International Building Code, or Section R322 of the International Residential Code, as applicable.

4. For a raised or extended foundation, if the foundation work and all other proposed work, when combined, constitutes *substantial improvement*, the *existing building* shall comply with Section 1612 of the International Building Code, or Section R322 of the International Residential Code, as applicable.

5. For a new foundation or replacement foundation, the foundation shall comply with Section 1612 of the International Building Code, or Section R322 of the International Residential Code, as applicable.

[BS] 1301.3.3 Compliance with flood hazard provisions. In *flood hazard areas*, buildings that are evaluated in accordance with this section shall comply with Section 1612 of the International Building Code, or Section R322 of the International Residential Code, as applicable, if the work covered by this section constitutes *substantial improvement*. If the work covered by this section is a structurally connected horizontal addition that does not constitute substantial improvement, the building is not required to comply with the flood design requirements for new construction provided that both of the following apply.

1. The addition shall not create or extend any nonconformity of the existing building with the flood resistant construction requirements.
2. The lowest floor of the addition shall be at or above the lower of the lowest floor of the existing building or the lowest floor elevation required in Section 1612 of the International Building Code, or Section R322 of the International Residential Code, as applicable.

Reason: The IEBC, like the National Flood Insurance Program (NFIP), includes requirements for alterations and additions (improvements) to existing buildings in flood hazard areas. The trigger for compliance is in the definition for “substantial improvement.” The definition for “substantial damage” specifies the trigger when floodplain buildings are damaged. The trigger is sometimes referred to as the “50% rule” because compliance is required when the cost of proposed improvements or required repairs equals or exceeds 50 percent of the market value of the existing building before the work is done or before damage occurred. FEMA guidance, like IEBC Section 1103.3, distinguishes compliance of additions from compliance of the existing (or base) building.

The IEBC Sec. 502.1 already states that alterations must be made to ensure the existing buildings together with an addition, is “not less complying with” the requirements of the code than the existing building was before the addition. IBC Sec. 1101.2 echoes that limitation, by stating that an addition “shall not create or extend any nonconformity.” Buildings in flood hazard areas that were built before communities adopted regulations usually are nonconforming. Therefore, the basic premise that additions must not make nonconforming buildings more

nonconforming includes consideration of the flood resistant requirements of the IBC and IRC.

The proposed amendments reinforce what is already a requirement of the code. The amendments make it clear that additions, even if not substantial improvement (i.e., cost less than 50% of the market value), must not make a nonconforming building more nonconforming. The way to ensure this is to have specific requirements for "non-substantial" additions stating those additions must not be lower than the lowest floors of the existing buildings because being lower would render the buildings more nonconforming. Similarly, non-substantial additions to conforming (or compliant) buildings must not make those buildings nonconforming. The proposal accounts for additions to buildings that are elevated higher than the requirements of the code by specifying additions to those buildings must be at least as high as the elevations required in IBC Section 1612 or IRC Section R322, as applicable.

Another scenario that is addressed by this proposal is when owners of buildings elevated on columns or pilings decide to enclose the area under the elevated buildings. Enclosing an area meets the definition of addition because it creates an "extension or increase in floor area." Even when enclosing the area underneath is not a "substantial improvement" based on cost, the work is only allowed when the walls and the use of the proposed enclosure comply with the requirements for enclosures. Otherwise, the enclosure would either create noncompliance or extend nonconformance.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
The code change proposal clarifies the application of the existing IEBC requirement that work on an existing building must not make a nonconforming building more nonconforming. The proposal is consistent with the existing requirement that additions must not create or extend any nonconformity. There is no change to the technical content of the provisions. By clarifying the existing requirement as it applies to additions to buildings in flood hazard areas, there will be no cost impact when approving this proposal.

Public Hearing Results

Committee Action **As Modified**

THIS CODE CHANGE WAS HEARD BY THE IBC-STRUCTURAL COMMITTEE.

Committee Modification:

[BS]1103.3 Flood hazard areas. *Additions* and *foundations* in *flood hazard areas* shall comply with the following requirements:

1. For horizontal *additions* that are structurally interconnected to the *existing building*:
   1.1. If the *addition* and all other proposed work, when combined, constitute *substantial improvement*, the *existing building* and the *addition* shall comply with Section 1612 of the *International Building Code*, or Section R322 of the International Residential Code, as applicable.

   1.2. If the *addition* constitutes *substantial improvement*, the *existing building* and the *addition* shall comply with Section 1612 of the International Building Code, or Section R322 of the International Residential Code, as applicable.

   1.3 If the addition does not constitute substantial improvement the ~~existing structure~~ addition is not required to comply with the flood design requirements for new construction provided that both of the following apply.
      1.3.1 The addition shall not create or extend any nonconformity of the existing building with the flood resistant construction requirements.

      1.3.2 The lowest floor of the addition shall be at or above the lower of the lowest floor of the existing building or the lowest floor elevation required in Section 1612 of the International Building Code, or Section R322 of the International Residential Code, as applicable.

2. For horizontal *additions* that are not structurally interconnected to the *existing building*:
   2.1. The *addition* shall comply with Section 1612 of the International Building Code, or Section R322 of the International Residential Code, as applicable.

   2.2. If the *addition* and all other proposed work, when combined, constitute *substantial improvement*, the *existing building* and the *addition* shall comply with Section 1612 of the International Building Code, or Section R322 of the International Residential Code, as applicable.

3. For vertical *additions* and all other proposed work that, when combined, constitutes *substantial improvement*, the *existing building* shall comply with Section 1612 of the International Building Code, or Section R322 of the International Residential Code, as applicable.
4. For a raised or extended foundation, if the foundation work and all other proposed work, when combined, constitutes *substantial improvement*, the *existing building* shall comply with Section 1612 of the International Building Code, or Section R322 of the International Residential Code, as applicable.
5. For a new foundation or replacement foundation, the foundation shall comply with Section 1612 of the International Building Code, or Section R322 of the International Residential Code, as applicable.

[BS]1301.3.3 Compliance with flood hazard provisions. In *flood hazard areas*, buildings that are evaluated in accordance with this section shall comply with Section 1612 of the International Building Code, or Section R322 of the International Residential Code, as applicable, if the work covered by this section constitutes *substantial improvement*. If the work covered by this section is a structurally connected horizontal addition that does not constitute substantial improvement, the ~~building~~ addition is not required to comply with the flood design requirements for new construction provided that both of the following apply.

1. The addition shall not create or extend any nonconformity of the existing building with the flood resistant construction requirements.
2. The lowest floor of the addition shall be at or above the lower of the lowest floor of the existing building or the lowest floor elevation required in Section 1612 of the International Building Code, or Section R322 of the International Residential Code, as applicable.

Committee Reason: Approved as modified as the term 'addition' is preferred and as per the provided reason statement. The modification clarifies that 'addition' is the preferred term. (Vote: 13-1)

Public Comments

Public Comment 1

Proponents: Jonathan Siu, Jon Siu Consulting, LLC, Self (jonsiuconsulting@gmail.com) requests As Modified by Public Comment

Further modify as follows:

2021 International Existing Building Code

[BS] 502.3 Flood hazard areas. For buildings and structures in *flood hazard* areas established in Section 1612.3 of the International Building Code, or Section R322 of the International Residential Code, as applicable, any *addition* that constitutes *substantial improvement* of the *existing structure* shall comply with the flood design requirements for new construction, and all aspects of the *existing structure* shall be brought into compliance with the requirements for new construction for flood design.

For buildings and structures in *flood hazard areas* established in Section 1612.3 of the International Building Code, or Section R322 of the International Residential Code, as applicable, any *additions* that do not constitute *substantial improvement* of the *existing structure* are not

required to comply with the flood design requirements for new construction provided that both of the following apply:

1. The addition shall not create or extend a nonconformity of the existing building or structure with the flood resistant construction requirements ~~than the existing building or structure was prior to the addition~~
2. The lowest floor of the addition shall be at or above the lower of the lowest floor of the existing building or structure or the lowest floor elevation required in Section 1612 of the International Building Code, or Section R322 of the International Residential Code, as applicable.

,

Commenter's Reason: This public comment is being submitted to clarify the proposal. As approved by the committee, the language of this item is convoluted and confusing. The same concept is expressed much more succinctly and clearly in Section 1103.3, Item 1.3.1 in this same proposal. I pointed this out to the proponents at the Committee Action Hearings.
This public comment deletes the confusing language, which then makes this item identical to the parallel requirement in Section1103.3, Item 1.3.1.

Cost Impact: The net effect of the Public Comment and code change proposal will not increase or decrease the cost of construction
The cost impact statement for the original proposal says there will be no cost impact in approving the proposal. This public comment just clarifies the proposal, so it will have no effect on the original cost impact statement.

Final Hearing Results

EB50-22 AMPC1

EB51-22

Original Proposal

IEBC: [BS] 502.3, [BS] 1103.3

Proponents: Gregory Wilson, Federal Emergency Management Agency, FEMA (gregory.wilson2@fema.dhs.gov); Rebecca Quinn, RCQuinn Consulting, Inc., DHS Federal Emergency Management Agency (rcquinn@earthlink.net)

THIS CODE CHANGE WILL BE HEARD BY THE IBC-STRUCTURAL CODE COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THAT COMMITTEE.

2021 International Existing Building Code

Revise as follows:

[BS] 502.3 Flood hazard areas. For buildings and structures in *flood hazard* areas established in Section 1612.3 of the International Building Code, or Section R322 of the International Residential Code, as applicable, any *addition* that constitutes *substantial improvement* of the *existing structure* shall comply with the flood design requirements for new construction, and all aspects of the *existing structure* shall be brought into compliance with the requirements for new construction for flood design. For new foundations, foundations raised or extended in the vertical, and replacement foundations, the foundations shall be in compliance with the requirements for new construction for flood design.

For buildings and structures in *flood hazard areas* established in Section 1612.3 of the International Building Code, or Section R322 of the International Residential Code, as applicable, any *additions* that do not constitute *substantial improvement* of the *existing structure* are not required to comply with the flood design requirements for new construction.

[BS] 1103.3 Flood hazard areas. *Additions* and *foundations* in *flood hazard areas* shall comply with the following requirements:

1. For horizontal *additions* that are structurally interconnected to the *existing building*:
   1.1. If the *addition* and all other proposed work, when combined, constitutes *substantial improvement*, the *existing building* and the *addition* shall comply with Section 1612 of the *International Building Code*, or Section R322 of the International Residential Code, as applicable.

   1.2. If the *addition* constitutes *substantial improvement*, the *existing building* and the *addition* shall comply with Section 1612 of the International Building Code, or Section R322 of the International Residential Code, as applicable.

2. For horizontal *additions* that are not structurally interconnected to the *existing building*:
   2.1. The *addition* shall comply with Section 1612 of the International Building Code, or Section R322 of the International Residential Code, as applicable.

   2.2. If the *addition* and all other proposed work, when combined, constitutes *substantial improvement*, the *existing building* and the *addition* shall comply with Section 1612 of the International Building Code, or Section R322 of the International Residential Code, as applicable.

3. For vertical *additions* and all other proposed work that, when combined, constitutes *substantial improvement*, the *existing building* shall comply with Section 1612 of the International Building Code, or Section R322 of the International Residential Code, as applicable.

4. ~~For a raised or extended foundation, if the foundation work and all other proposed work, when combined, constitutes *substantial improvement*, the *existing building* shall comply with Section 1612 of the International Building Code, or Section R322 of the International Residential Code, as applicable.~~

4~~5~~. For a new foundation, ~~or~~ replacement foundation, or a foundation raised or extended in the vertical, the foundation shall comply with Section 1612 of the International Building Code, or Section R322 of the International Residential Code, as applicable.

Reason: Whether an existing building will have a new foundation, replacement foundation, or a foundation that is raised or extended in the vertical, the construction process is generally the same: the building must be detached from the existing foundation and jacked up to allow the foundation work to proceed. Then, after the foundation work is complete, the building is lowered and structurally attached to the foundation. The costs to detach the building, jack it up, and lower and attach it to the foundation, do not change significantly based on how tall the new foundation will be.

The existing provisions in Section 502.3 and Section 1103.3 allow a building in a flood hazard area to remain below the required elevation (and possibly on an incompatible foundation type) if the work is determined to not constitute substantial improvement (a defined term). If a foundation is already being raised or extended in the vertical, it should be raised to the same elevation required for new construction in flood hazard areas. The I-Codes define "addition" to include an increase in height, which is why foundation work is included in IEBC Sec. 1103.3 and why the proposed change amends a section in Chapter 5 Additions.

When owners of buildings in flood hazard areas have already decided to invest in this type of extensive work, having the final foundation be resistant to identified flood conditions and flood loads is appropriate to protect that investment, as well as the investment in and safety of the building itself. The incremental cost of adding additional height to a foundation that is already being replaced or raised or extended in the vertical is offset by the benefits of lower risk of flood damage and lower NFIP flood insurance policy premiums which are, in part, a function of elevation.

Cost Impact: The code change proposal will increase the cost of construction

A change in cost would only occur for buildings in flood hazard areas that are already having their foundations raised or extended in the vertical, and then only if those foundations need to be higher to meet the elevations specified in ASCE 24 (which requires at least base flood elevation plus one foot). The code change proposal requires foundations that are raised or extended in the vertical to comply with flood resistant requirements, regardless of whether the cost of the work triggers the substantial improvement requirement. This type of project involves extensive work, with the majority of costs associated with the work elements other than the foundation construction. Because an owner proposing to raise, extend, or replace a foundation is already willing to incur those costs for foundations at lower heights, any additional costs are only those for added height to reach the elevation required by the Code. The per-foot cost of additional height is a function of the additional height and of the type of foundation, which typically are columns or perimeter walls.

FEMA manages a number of mitigation grant programs that fund elevation-in-place projects in flood hazard areas. Using cost sheets for two FEMA funded projects to elevate homes on concrete columns and CMU skirting (one smaller footprint but higher elevation, the other larger footprint but lower elevation), the foundation-only costs per additional foot of height average 2.3% of the total elevation projects. In a 2018 review of the per-foot cost for adding height to the foundation of a 2000 square foot light framed construction building (dwelling), FEMA estimated the cost per additional foot was $2144 (concrete perimeter wall with interior piers) and $1,850 (CMU perimeter wall with interior piers).

Offsetting benefits of having raised or extended foundations fully comply include long-term damage avoided. Also, flood insurance policies written by the National Flood Insurance Program may be reduced because the rating is based, in part, on the elevation of the top of the lowest floor.

Public Hearing Results

Committee Action **As Modified**

THIS CODE CHANGE WAS HEARD BY THE IBC-STRUCTURAL COMMITTEE.

Committee Modification:

2021 International Existing Building Code

[BS]502.3 Flood hazard areas. For buildings and structures in *flood hazard* areas established in Section 1612.3 of the International Building Code, or Section R322 of the International Residential Code, as applicable, any *addition* that constitutes *substantial improvement* of the *existing structure* shall comply with the flood design requirements for new construction, and all aspects of the*existing structure* shall be brought into compliance with the requirements for new construction for flood design. For new foundations, foundations raised or extended <u>upward</u> ~~in the vertical~~, and replacement foundations, the foundations shall be in compliance with the requirements for new construction for flood design.

For buildings and structures in *flood hazard areas* established in Section 1612.3 of the International Building Code, or Section R322 of the

International Residential Code, as applicable, any *additions* that do not constitute *substantial improvement* of the *existing structure* are not required to comply with the flood design requirements for new construction.

[BS]1103.3 Flood hazard areas. *Additions* and *foundations* in *flood hazard areas* shall comply with the following requirements:

1. For horizontal *additions* that are structurally interconnected to the *existing building*:
   1.1. If the *addition* and all other proposed work, when combined, constitute *substantial improvement*, the *existing building* and the *addition* shall comply with Section 1612 of the *International Building Code*, or Section R322 of the International Residential Code, as applicable.
   1.2. If the *addition* constitutes *substantial improvement*, the *existing building* and the *addition* shall comply with Section 1612 of the International Building Code, or Section R322 of the International Residential Code, as applicable.
2. For horizontal *additions* that are not structurally interconnected to the *existing building*:
   2.1. The *addition* shall comply with Section 1612 of the International Building Code, or Section R322 of the International Residential Code, as applicable.
   2.2. If the *addition* and all other proposed work, when combined, constitute *substantial improvement*, the *existing building* and the *addition* shall comply with Section 1612 of the International Building Code, or Section R322 of the International Residential Code, as applicable.
3. For vertical *additions* and all other proposed work that, when combined, constitute *substantial improvement*, the *existing building* shall comply with Section 1612 of the International Building Code, or Section R322 of the International Residential Code, as applicable.
4. For a new foundation, replacement foundation, or a foundation raised or extended upward ~~in the vertical~~, the foundation shall comply with Section 1612 of the International Building Code, or Section R322 of the International Residential Code, as applicable.

Committee Reason: Approved as modified as this clarifies the intent for 'extended upward' and as per the provided reason statement. The modification clarifies the intent with the use of the term "upward" versus "in the vertical." (Vote: 14-0)

Final Hearing Results

EB51-22 AM

EB56-22

Original Proposal

IEBC: 502.5 (New), 1101.4 (New)

Proponents: John Williams, Committee on Healthcare (ahc@iccsafe.org)

2021 International Existing Building Code

Add new text as follows:

502.5 Smoke Barriers in Group I-1, Condition 2. Where an addition to an existing Group I-1, Condition 2 building adds sleeping areas that result in more than 50 care recipients on a story, smoke barriers shall be provided to subdivide such story into not fewer than two smoke compartments in accordance with Section 420.6 of the International Building Code.

Exception: Where the existing building is divided into smoke compartments, and the addition does not result in any individual smoke compartment exceeding the size and travel distance requirements in Section 420.6 of the International Building Code, additional smoke barriers are not required.

1101.4 Smoke Barriers in Group I-1, Condition 2. Where an addition to an existing Group I-1, Condition 2 building adds sleeping areas that result in more than 50 care recipients on a story, smoke barriers shall be provided to subdivide such story into not fewer than two smoke compartments in accordance with Section 420.6 of the International Building Code.

Exception: Where the existing building is divided into smoke compartments, and the addition does not result in any individual smoke compartment exceeding the size and travel distance requirements in Section 420.6 of the International Building Code, additional smoke barriers are not required.

Reason: The intent of this proposal is to clarify what is required where an existing Group I-1, Condition 2 has an addition. It is not reasonable for a small addition to trigger a major renovation to create smoke compartments (IBC Section 420.6).
This code change adds clarification for when smoke compartments are required to be added to existing Group I-1, Condition 2 buildings when being expanded with an addition. Many Group I-1 occupancy buildings, built prior to 2015, were not required to have smoke compartments. This code change triggers requirements to add smoke barriers to those buildings once a story reaches a certain size; sleeping rooms for 50 care recipients. The trigger for 50 care recipients is consistent with Section 420.6 of the *IBC* for new Group I-1 Conditions 2. This requirement does not address additions of other uses. Either the number of care recipients is not be increased in the facility, or the addition is large enough that new construction requirements would apply.

The exception clarifies that this only applies to buildings that do not already have smoke compartmentalization, and only if those additions expand the compartment size beyond the thresholds set by Section 420.6 of the *International Building Code*.

This proposal is submitted by the Committee on Healthcare (CHC). The CHC was established by the ICC Board to evaluate and assess contemporary code issues relating to healthcare facilities. This is a joint effort between ICC and the American Society for Healthcare Engineering (ASHE), a subsidiary of the American Hospital Association, to eliminate duplication and conflicts in healthcare regulation. In 2020 and 2021 of the committees as well as any interested parties, to discuss and debate the proposed changes. Information on the CHC, including: meeting agendas; minutes; reports; resource documents; presentations; and all other materials developed in conjunction with the CHC effort can be downloaded from the CHC website at https://www.iccsafe.org/products-and-services/i-codes/code-development/cs/icc-committee-on-healthcare/.

Cost Impact: The code change proposal will increase the cost of construction
This proposal would potentially require smoke compartments to be constructed where the addition to an existing Group I-1, Condition 2 would result in more than 50 care recipients on a story. The exception provides some relief where existing smoke compartments still comply including the addition. Overall this section triggers the need for smoke compartments in existing buildings that was not required in the 2021 IEBC.

Public Hearing Results

Committee Action **As Submitted**

Committee Reason: This proposal was approved based upon the proponents reason statement and because it provides a reasonable and necessary threshold for the addition of smoke compartments to Group I-1 Group 2 occupancies. (Vote: 14-0)

Final Hearing Results

EB56-22 AS

EB61-22

Original Proposal

IEBC: [BS] 502.5, [BS] 503.4, [BS] 805.3, [BS] 1103.2

Proponents: David Bonowitz, David Bonowitz, S.E., FEMA-ATC Seismic Code Support Committee (dbonowitz@att.net); Kelly Cobeen, Wiss Janney Elstner Associates, Federal Emergency Management Agency/Applied Technology Council - Seismic Code Support Committee (kcobeen@wje.com); Michael Mahoney, FEMA, FEMA (mike.mahoney@fema.dhs.gov); Robert Pekelnicky, Degenkolb Enigneers, FEMA Seismic Code Support Committee (rpekelnicky@degenkolb.com)

THIS CODE CHANGE WILL BE HEARD BY THE IBC-STRUCTURAL CODE COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THAT COMMITTEE.

2021 International Existing Building Code

Revise as follows:

[BS] 502.5 Existing structural elements carrying lateral load. Where the *addition* is structurally independent of the *existing structure*, existing lateral load-carrying structural elements shall be permitted to remain unaltered. Where the *addition* is not structurally independent of the *existing structure*, the *existing structure* and its *addition* acting together as a single structure shall be shown to meet the requirements of Sections 1609 and 1613 of the International Building Code using full seismic forces.

Exceptions:

1. Any existing lateral load-carrying structural element whose demand-capacity ratio with the *addition* considered is not more than 10 percent greater than its demand-capacity ratio with the *addition* ignored shall be permitted to remain unaltered. For purposes of calculating demand-capacity ratios, the demand shall consider applicable load combinations with design lateral loads or forces in accordance with Sections 1609 and 1613 of the International Building Code. For purposes of this exception, comparisons of demand-capacity ratios and calculation of design lateral loads, forces and capacities shall account for the cumulative effects of *additions* and *alterations* since original construction.<u>When calculating demand-capacity ratios for wind, the date of original construction shall be permitted to be taken as the date of completion of a prior retrofit in compliance with Section 1609 of the *International Building Code* or thecodes or standards in effect at the time of the retrofit. When calculating demand-capacity ratios for earthquake, the date of original construction shall be permitted to be taken as the date of completion of a prior retrofit in compliance with Section 304.3.1 or the codes or standards in effect at the time of the retrofit</u>.
2. Buildings of Group R occupancy with not more than five dwelling or sleeping units used solely for residential purposes where the *existing building* and the *addition* together comply with the conventional light-frame construction methods of the *International Building Code* or the provisions of the *International Residential Code*.

[BS] 503.4 Existing structural elements carrying lateral load. Except as permitted by Section 503.13, where the *alteration* increases design lateral loads, results in a prohibited structural irregularity as defined in ASCE 7, or decreases the capacity of any existing lateral load-carrying structural element, the structure of the altered building or structure shall meet the requirements of Sections 1609 and 1613 of the International Building Code. Reduced seismic forces shall be permitted.

Exceptions:

1. Any existing lateral load-carrying structural element whose demand-capacity ratio with the alteration considered is not more than 10 percent greater than its demand-capacity ratio with the alteration ignored shall be permitted to remain unaltered. For purposes of calculating demand-capacity ratios, the demand shall consider applicable load combinations with design lateral loads or forces in accordance with Sections 1609 and 1613 of the *International Building Code*. Reduced seismic forces shall be permitted. For purposes of this exception, comparisons of demand-capacity ratios and calculation of design lateral loads, forces and capacities shall account for the cumulative effects of additions and alterations since original construction.
   When calculating demand-capacity ratios for wind, the date of original construction shall be permitted to be taken as the date of completion of a prior retrofit in compliance with Section 1609 of the International Building Code or the codes or standards in effect at the time of the retrofit. When calculating demand-capacity ratios for earthquake, the date of original construction shall be permitted to be taken as the date of completion of a prior retrofit in compliance with Section 304.3.1 or the codes or standards in effect at the time of the retrofit.

2. Buildings in which the increase in the demand-capacity ratio is due entirely to the addition of rooftop-supported mechanical equipment individually having an operating weight less than 400 pounds (181.4 kg) and where the total additional weight of all rooftop equipment placed after initial construction of the building is less than 10 percent of the roof dead load. For purposes of this exception, “roof” shall mean the roof level above a particular story.

[BS] 805.3 Existing structural elements resisting lateral loads. Except as permitted by Section 805.4, where the *alteration* increases design lateral loads, or where the alteration results in prohibited structural irregularity as defined in ASCE 7, or where the *alteration* decreases the capacity of any existing lateral load-carrying structural element, the structure of the altered building or structure shall meet the requirements of Sections 1609 and 1613 of the International Building Code. Reduced seismic forces shall be permitted.

Exception: Any existing lateral load-carrying structural element whose demand-capacity ratio with the *alteration* considered is not more than 10 percent greater than its demand-capacity ratio with the *alteration* ignored shall be permitted to remain unaltered. For purposes of calculating demand-capacity ratios, the demand shall consider applicable load combinations with design lateral loads or forces in accordance with Sections 1609 and 1613 of the International Building Code. Reduced seismic forces shall be permitted. For purposes of this exception, comparisons of demand-capacity ratios and calculation of design lateral loads, forces and capacities shall account for the cumulative effects of *additions* and *alterations* since original construction. When calculating demand-capacity ratios for wind, the date of original construction shall be permitted to be taken as the date of completion of a prior retrofit in compliance with Section 1609 of the International Building Code or the codes or standards in effect at the time of the retrofit. When calculating demand-capacity ratios for earthquake, the date of original construction shall be permitted to be taken as the date of completion of a prior retrofit in compliance with Section 304.3.1 or the codes or standards in effect at the time of the retrofit.

[BS] 1103.2 Lateral force-resisting system. Where the *addition* is structurally independent of the *existing structure*, existing lateral load-carrying structural elements shall be permitted to remain unaltered. Where the *addition* is not structurally independent of the *existing structure*, the *existing structure* and its *addition* acting together as a single structure shall meet the requirements of Sections 1609 and 1613 of the *International Building Code* using full seismic forces.

Exceptions:

1. Buildings of Group R occupancy with not more than five dwelling or sleeping units used solely for residential purposes where the *existing building* and the *addition* comply with the conventional light-frame construction methods of the *International Building Code* or the provisions of the *International Residential Code*.

2. Any existing lateral load-carrying structural element whose demand-capacity ratio with the *addition* considered is not more than 10 percent greater than its demand-capacity ratio with the *addition* ignored shall be permitted to remain unaltered. For purposes of calculating demand-capacity ratios, the demand shall consider applicable load combinations with design lateral loads or forces in accordance with Sections 1609 and 1613 of the *International Building Code*. For purposes of this exception, comparisons of demand-capacity ratios and calculation of design lateral loads, forces and capacities shall account for the cumulative effects of *additions* and *alterations* since original construction. When calculating demand-capacity ratios for wind, the date of original construction shall be permitted to be taken as the date of completion of a prior retrofit in compliance with Section 1609 of the International Building Code or the codes or standards in effect at the time of the retrofit. When calculating demand-capacity ratios for earthquake, the date of original construction shall be permitted to be taken as the date of completion of a prior retrofit in compliance with Section 304.3.1 or the codes or standards in effect at the time of the retrofit.

Reason: This proposal clarifies the meaning of “original construction” used to assess “cumulative effects” in the current “10% rule” exceptions for additions and alterations. The clarification rationally resets the baseline for assessing these cumulative effects when a qualifying retrofit is done.
The proposal ensures that lateral (wind and seismic) upgrades are not triggered too easily for buildings that should not need them because they have already been retrofitted. In clarifying this exception, the proposal makes no change in the intent of the exception overall. Further, since this is a rational interpretation of a point on which the current code is incomplete, it should not change the effect of the triggering provision or the exception.

The proposal makes matching edits to the Prescriptive and Work Area methods.

For each project type (addition or alteration), the qualifying prior retrofit matches the criteria applicable to the overall provision -- "full" seismic criteria for additions, and "reduced" criteria for alterations. However, in the case of alterations, only a full-building retrofit should be deemed to qualify, so a retrofit by Appendix A (Section 304.3.2 item 2) is not allowed.

Since prior retrofits would not typically be done to current standards in Section 304.3, all of the proposed changes also allow the qualifying retrofit to be one based on the corresponding criteria from the time of the retrofit.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
The proposal should have no impact on project cost because it merely clarifies a common-sense interpretation of the existing provisions. Where the current provision is misunderstood or misapplied, the proposal could actually result in lower project costs.

Public Hearing Results

Committee Action **As Modified**

THIS CODE CHANGE WAS HEARD BY THE IBC-STRUCTURAL COMMITTEE.

Committee Modification: 2021 International Existing Building Code

[BS] 502.5Existing structural elements carrying lateral load. Where the *addition* is structurally independent of the *existing structure*, existing lateral load-carrying structural elements shall be permitted to remain unaltered. Where the *addition* is not structurally independent of the *existing structure*, the *existing structure* and its *addition* acting together as a single structure shall be shown to meet the requirements of Sections 1609 and 1613 of the International Building Code using full seismic forces.

Exceptions:

1. Any existing lateral load-carrying structural element whose demand-capacity ratio with the *addition* considered is not more than 10 percent greater than its demand-capacity ratio with the *addition* ignored shall be permitted to remain unaltered. For purposes of calculating demand-capacity ratios, the demand shall consider applicable load combinations with design lateral loads or forces in accordance with Sections 1609 and 1613 of the International Building Code. For purposes of this exception, comparisons of demand-capacity ratios and calculation of design lateral loads, forces and capacities shall account for the cumulative effects of *additions* and *alterations* since original construction.When calculating demand-capacity ratios for wind, the date of original construction shall be permitted to be taken as the date of completion of a prior ~~retrofit~~ addition, alteration, or repair in compliance with Section 1609 of the *International Building Code* or the ~~codes or standards~~ code wind forces in effect at the time ~~of the retrofit~~. When calculating demand-capacity ratios for earthquake, the date of original construction shall be permitted to be taken as the date of completion of a prior ~~retrofit~~ addition, alteration, or repair in compliance with Section 304.3.1 or the ~~codes or standards~~ full seismic forces in effect at the time ~~of the retrofit~~.
2. Buildings of Group R occupancy with not more than five dwelling or sleeping units used solely for residential purposes where the *existing building* and the *addition* together comply with the conventional light-frame construction methods of the *International Building Code* or the provisions of the *International Residential Code*.

[BS]503.4 Existing structural elements carrying lateral load. Except as permitted by Section 503.13, where the *alteration* increases design lateral loads, results in a prohibited structural irregularity as defined in ASCE 7, or decreases the capacity of any existing lateral load-carrying structural element, the structure of the altered building or structure shall meet the requirements of Sections 1609 and 1613 of

the International Building Code. Reduced seismic forces shall be permitted.

Exceptions:

1. Any existing lateral load-carrying structural element whose demand-capacity ratio with the alteration considered is not more than 10 percent greater than its demand-capacity ratio with the alteration ignored shall be permitted to remain unaltered. For purposes of calculating demand-capacity ratios, the demand shall consider applicable load combinations with design lateral loads or forces in accordance with Sections 1609 and 1613 of the *International Building Code*. Reduced seismic forces shall be permitted. For purposes of this exception, comparisons of demand-capacity ratios and calculation of design lateral loads, forces and capacities shall account for the cumulative effects of additions and alterations since original construction.When calculating demand-capacity ratios for wind, the date of original construction shall be permitted to be taken as the date of completion of a prior ~~retrofit~~ addition, alteration, or repair in compliance with Section 1609 of the *International Building Code* or the ~~codes or standards~~ code wind forces in effect at the time ~~of the retrofit~~. When calculating demand-capacity ratios for earthquake, the date of original construction shall be permitted to be taken as the date of completion of a prior ~~retrofit~~ addition, alteration, or repair in compliance with Section 304.3.1 or Section 304.3.2 item 1 or item 3 or the ~~codes or standards~~ full or reduced seismic forces in effect at the time ~~of the retrofit~~.
2. Buildings in which the increase in the demand-capacity ratio is due entirely to the addition of rooftop-supported mechanical equipment individually having an operating weight less than 400 pounds (181.4 kg) and where the total additional weight of all rooftop equipment placed after initial construction of the building is less than 10 percent of the roof dead load. For purposes of this exception, “roof” shall mean the roof level above a particular story.

[BS]805.3 Existing structural elements resisting lateral loads. Except as permitted by Section 805.4, where the *alteration* increases design lateral loads, or where the alteration results in prohibited structural irregularity as defined in ASCE 7, or where the *alteration* decreases the capacity of any existing lateral load-carrying structural element, the structure of the altered building or structure shall meet the requirements of Sections 1609 and 1613 of the International Building Code. Reduced seismic forces shall be permitted.

Exception: Any existing lateral load-carrying structural element whose demand-capacity ratio with the *alteration* considered is not more than 10 percent greater than its demand-capacity ratio with the *alteration* ignored shall be permitted to remain unaltered. For purposes of calculating demand-capacity ratios, the demand shall consider applicable load combinations with design lateral loads or forces in accordance with Sections 1609 and 1613 of the International Building Code. Reduced seismic forces shall be permitted. For purposes of this exception, comparisons of demand-capacity ratios and calculation of design lateral loads, forces and capacities shall account for the cumulative effects of *additions* and *alterations* since original construction. When calculating demand-capacity ratios for wind, the date of original construction shall be permitted to be taken as the date of completion of a prior ~~retrofit~~ addition, alteration, or repair in compliance with Section 1609 of the *International Building Code* or the ~~codes or standards~~ code wind forces in effect at the time ~~of the retrofit~~. When calculating demand-capacity ratios for earthquake, the date of original construction shall be permitted to be taken as the date of completion of a prior ~~retrofit~~ addition, alteration, or repair in compliance with Section 304.3.1 or Section 304.3.2 item 1 or item 3 or the ~~codes or standards~~ full or reduced seismic forces in effect at the time ~~of the retrofit~~.

[BS] 1103.2 Lateral force-resisting system. Where the *addition* is structurally independent of the *existing structure*, existing lateral load-carrying structural elements shall be permitted to remain unaltered. Where the *addition* is not structurally independent of the *existing structure*, the *existing structure* and its *addition* acting together as a single structure shall meet the requirements of Sections 1609 and 1613 of the *International Building Code* using full seismic forces.

Exceptions:

1. Buildings of Group R occupancy with not more than five dwelling or sleeping units used solely for residential purposes where the *existing building* and the *addition* comply with the conventional light-frame construction methods of the *International Building Code* or the provisions of the *International Residential Code*.

2. Any existing lateral load-carrying structural element whose demand-capacity ratio with the *addition* considered is not more than 10 percent greater than its demand-capacity ratio with the *addition* ignored shall be permitted to remain unaltered. For purposes of calculating demand-capacity ratios, the demand shall consider applicable load combinations with design lateral loads or forces in accordance with Sections 1609 and 1613 of the *International Building Code*. For purposes of this exception, comparisons of demand-capacity ratios and calculation of design lateral loads, forces and capacities shall account for the cumulative effects of *additions* and *alterations* since original construction.When calculating demand-capacity ratios for wind, the date of original construction shall be permitted to be taken as the date of completion of a prior ~~retrofit~~ addition, alteration, or repair in compliance with Section 1609 of the *International Building Code* or the ~~codes or standards~~ code wind forces in effect at the time ~~of the retrofit~~. When calculating demand-capacity ratios for earthquake, the date of original construction shall be permitted to be taken as the date of completion of a prior ~~retrofit~~ addition, alteration, or repair in compliance with Section 304.3.1 or the ~~codes or standards~~ full seismic forces in effect at the time ~~of the retrofit~~.

Committee Reason: Approved as modified as this addresses a need in the IEBC on when to 'reset the clock' when calculating demand-capacity ratios. The modification clarifies the intent by using appropriate code terminology and removes general reference to standards for wind and seismic forces. (Vote: 9-5)

Final Hearing Results

EB61-22 AM

EB63-22

Original Proposal

IEBC: [BS] 503.4, [BS] 805.3

Proponents: Michael Fillion, National Council of Structural Engineers Associations (mrf.structure@verizon.net)

THIS CODE CHANGE WILL BE HEARD BY THE IBC-STRUCTURAL CODE COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THAT COMMITTEE.

2021 International Existing Building Code

Revise as follows:

[BS] 503.4 Existing structural elements carrying lateral load. Except as permitted by Section 503.13, where the *alteration* increases design lateral loads, results in a prohibited structural irregularity as defined in ASCE 7, or decreases the capacity of any existing lateral load-carrying structural element, the structure of the altered building or structure shall meet the requirements of Sections 1609 and 1613 of the International Building Code. Reduced seismic forces shall be permitted.

Exceptions:

1. Any existing lateral load-carrying structural element whose demand-capacity ratio with the alteration considered is not more than 10 percent greater than its demand-capacity ratio with the alteration ignored shall be permitted to remain unaltered. For purposes of calculating demand-capacity ratios, the demand shall consider applicable load combinations with design lateral loads or forces in accordance with Sections 1609 and 1613 of the *International Building Code*. Reduced seismic forces shall be permitted. <u>The same loads shall be considered in the evaluation of both the altered and unaltered structures.</u>For purposes of this exception, comparisons of demand-capacity ratios and calculation of design lateral loads, forces and capacities shall account for the cumulative effects of additions and alterations since original construction.
2. Buildings in which the increase in the demand-capacity ratio is due entirely to the addition of rooftop-supported mechanical equipment individually having an operating weight less than 400 pounds (181.4 kg) and where the total additional weight of all rooftop equipment placed after initial construction of the building is less than 10 percent of the roof dead load. For purposes of this exception, “roof” shall mean the roof level above a particular story.

[BS] 805.3 Existing structural elements resisting lateral loads. Except as permitted by Section 805.4, where the *alteration* increases design lateral loads, or where the alteration results in prohibited structural irregularity as defined in ASCE 7, or where the *alteration* decreases the capacity of any existing lateral load-carrying structural element, the structure of the altered building or structure shall meet the requirements of Sections 1609 and 1613 of the International Building Code. Reduced seismic forces shall be permitted.

Exception: Any existing lateral load-carrying structural element whose demand-capacity ratio with the *alteration* considered is not more than 10 percent greater than its demand-capacity ratio with the *alteration* ignored shall be permitted to remain unaltered. For purposes of calculating demand-capacity ratios, the demand shall consider applicable load combinations with design lateral loads or forces in accordance with Sections 1609 and 1613 of the International Building Code. Reduced seismic forces shall be permitted. <u>The same loads shall be considered in the evaluation of both the altered and unaltered structures.</u> For purposes of this exception, comparisons of demand-capacity ratios and calculation of design lateral loads, forces and capacities shall account for the cumulative effects of *additions* and *alterations* since original construction.

Reason: Misinterpretation of this exception can lead to unconservative determinations on weather existing structural elements carrying lateral load need to meet the requirements of the *International Building Code* or not. This proposal clearly states when considering the 10% exception, there must be consistency in the seismic loads used for comparing the unaltered and altered structures. In other words, if reduced seismic loads are used to evaluate the unaltered structure, reduced seismic loads must also be used to evaluate the altered structure. If full seismic loads are used to evaluate the unaltered structure, full seismic loads must also be used to evaluate the altered structure.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
There is no cost impact associated with this proposal as it is intended for clarification of the intent of this code provision.

Public Hearing Results

Committee Action **As Modified**

THIS CODE CHANGE WAS HEARD BY THE IBC-STRUCTURAL COMMITTEE.

Committee Modification: 2021 International Existing Building Code

[BS]503.4 Existing structural elements carrying lateral load. Except as permitted by Section 503.13, where the *alteration* increases design lateral loads, results in a prohibited structural irregularity as defined in ASCE 7, or decreases the capacity of any existing lateral load-carrying structural element, the structure of the altered building or structure shall meet the requirements of Sections 1609 and 1613 of the International Building Code. Reduced seismic forces shall be permitted.

Exceptions:

1. Any existing lateral load-carrying structural element whose demand-capacity ratio with the alteration considered is not more than 10 percent greater than its demand-capacity ratio with the alteration ignored shall be permitted to remain unaltered. For purposes of calculating demand-capacity ratios, the demand shall consider applicable load combinations with design lateral loads or forces in accordance with Sections 1609 and 1613 of the *International Building Code*. Reduced seismic forces shall be permitted. The same ~~loads~~ methodology shall be used for ~~considered in the evaluation of both~~ the altered and unaltered structures. For purposes of this exception, comparisons of demand-capacity ratios and calculation of design lateral loads, forces and capacities shall account for the cumulative effects of additions and alterations since original construction.
2. Buildings in which the increase in the demand-capacity ratio is due entirely to the addition of rooftop-supported mechanical equipment individually having an operating weight less than 400 pounds (181.4 kg) and where the total additional weight of all rooftop equipment placed after initial construction of the building is less than 10 percent of the roof dead load. For purposes of this exception, “roof” shall mean the roof level above a particular story.

[BS]805.3 Existing structural elements resisting lateral loads. Except as permitted by Section 805.4, where the *alteration* increases design lateral loads, or where the alteration results in prohibited structural irregularity as defined in ASCE 7, or where the *alteration* decreases the capacity of any existing lateral load-carrying structural element, the structure of the altered building or structure shall meet the requirements of Sections 1609 and 1613 of the International Building Code. Reduced seismic forces shall be permitted.

Exception: Any existing lateral load-carrying structural element whose demand-capacity ratio with the *alteration* considered is not more than 10 percent greater than its demand-capacity ratio with the *alteration* ignored shall be permitted to remain unaltered. For purposes of calculating demand-capacity ratios, the demand shall consider applicable load combinations with design lateral loads or forces in accordance with Sections 1609 and 1613 of the International Building Code. Reduced seismic forces shall be permitted. The same ~~loads~~ methodology shall be used for ~~considered in the evaluation of both~~ the altered and unaltered structures. For purposes of this exception, comparisons of demand-capacity ratios and calculation of design lateral loads, forces and capacities shall account for the cumulative effects of *additions* and *alterations* since original construction.

Committee Reason: Approved as modified as this proposal makes it clear that the code requires that one must apply a consistent methodology between both the altered and unaltered structures. The modification replaces the term 'same loads' to 'same methodology' to clarify intent. (Vote: 13-1)

Final Hearing Results

EB63-22 AM

EB64-22

Original Proposal

IEBC: SECTION 202 (New), [BS] 503.4, [BS] 805.3

Proponents: Ali Fattah, City of San Diego Development Services Department, City of San Diego Development Services Department (AFATTAH@SANDIEGO.GOV)

THIS CODE CHANGE WILL BE HEARD BY THE IBC-STRUCTURAL CODE COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THAT COMMITTEE.

2021 International Existing Building Code

Add new definition as follows:

PHOTOVOLTAIC PANEL SYSTEM. A system that incorporates discrete photovoltaic panels, that converts solar radiation into electricity, including rack support systems.

Revise as follows:

[BS] 503.4 Existing structural elements carrying lateral load. Except as permitted by Section 503.13, where the *alteration* increases design lateral loads, results in a prohibited structural irregularity as defined in ASCE 7, or decreases the capacity of any existing lateral load-carrying structural element, the structure of the altered building or structure shall meet the requirements of Sections 1609 and 1613 of the International Building Code. Reduced seismic forces shall be permitted.

Exceptions:

1. Any existing lateral load-carrying structural element whose demand-capacity ratio with the alteration considered is not more than 10 percent greater than its demand-capacity ratio with the alteration ignored shall be permitted to remain unaltered. For purposes of calculating demand-capacity ratios, the demand shall consider applicable load combinations with design lateral loads or forces in accordance with Sections 1609 and 1613 of the *International Building Code*. Reduced seismic forces shall be permitted. For purposes of this exception, comparisons of demand-capacity ratios and calculation of design lateral loads, forces and capacities shall account for the cumulative effects of additions and alterations since original construction.
2. Buildings in which the increase in the demand-capacity ratio is due entirely to the addition of rooftop-supported mechanical equipment individually having an operating weight less than 400 pounds (181.4 kg) and where the total additional weight of all rooftop equipment placed after initial construction of the building is less than 10 percent of the roof dead load. For purposes of this exception, “roof” shall mean the roof level above a particular story.
3. The installation of rooftop *photovoltaic panel systems* where the additional roof dead load due to the system, including ballast where applicable, does not exceed 5 psf and 10% of the dead load of the existing roof.

[BS] 805.3 Existing structural elements resisting lateral loads. Except as permitted by Section 805.4, where the *alteration* increases design lateral loads, or where the alteration results in prohibited structural irregularity as defined in ASCE 7, or where the *alteration* decreases the capacity of any existing lateral load-carrying structural element, the structure of the altered building or structure shall meet the requirements of Sections 1609 and 1613 of the International Building Code. Reduced seismic forces shall be permitted.

Exception:

1. Any existing lateral load-carrying structural element whose demand-capacity ratio with the *alteration* considered is not more than 10 percent greater than its demand-capacity ratio with the *alteration* ignored shall be permitted to remain unaltered. For purposes of calculating demand-capacity ratios, the demand shall consider applicable load combinations with design lateral loads or forces in accordance with Sections 1609 and 1613 of the International Building Code. Reduced seismic forces shall be permitted. For purposes of this exception, comparisons of demand-capacity ratios and calculation of design lateral loads, forces and capacities shall account for the cumulative effects of *additions* and *alterations* since original construction.

2. Buildings in which the increase in the demand-capacity ratio is due entirely to the addition of rooftop-supported mechanical equipment individually having an operating weight less than 400 pounds (181.4 kg) and where the total additional weight of all rooftop equipment placed after initial construction of the building is less than 10 percent of the roof dead load. For purposes of this exception, "roof" shall mean the roof level above a particular story.
3. The installation of rooftop *photovoltaic panel systems* where the additional roof dead load due to the system, including ballast where applicable, does not exceed 5 psf and 10% of the dead load of the existing roof.

Reason: The IEBC includes a needed exception to exempt existing buildings undergoing alterations from compliance with more current seismic requirements in IBC chapter 16. The existing exception uses demand/capacity ratios (DCR) to identify a threshold below which the alteration is not deemed to be significant enough to require an evaluation and possible upgrade of the existing lateral force resisting system. Demand equates to the load applied to the lateral force resisting system and capacity equates the strength of the lateral force resisting system to resist the lateral load. Demand can be impacted by an increase in gravity load, alternations that redirect load to existing elements in addition to the loads they resist prior to the alteration, for example force transfer around and due to a large floor/roof opening. The capacity of existing lateral force resisting elements can be impacted by alterations that cut into the elements such as for example reducing the length of a shearwall.
Roof top solar photovoltaic systems, and especially those with ballast, may increase the demand capacity ratio of lateral force resisting systems due to the location of the installation relative to the existing lines of resistance below the roof. For example a building that includes lateral force resisting systems at the interior of the building in addition to those at the exterior may cause an in creased demand-capacity ratio DCR at the interior shearwalls due additional tributary loads. As a consequence and without the proposed code change the installation of a rooftop solar system would require that a structural engineer identify the existing lateral force resisting system (possibly without the benefit of having existing plans), determine its capacity and determine the demand and thus demonstrate that the DCR increase is not increased by more than 10%. This requirement imposes a significant burden on buildings constructed with light framed wood construction due to the localized impact of the alteration since unlike other buildings they do not incorporate heavier concrete or steel floors and roofs or heavier concrete or masonry exterior walls. Heavier walls and roofs will allow the roof top installations to easily satisfy the DCR limit.

Earthquake loads are impacted by gravity loads and the addition of roof-top solar and ballast will contribute additional dead load to the overall building structure. Gravity load effects tend to be localized where lateral load effects envisioned by Sections 503.4 and 805.3 tend to be more global; lateral load effects due to earthquake tend to be based on a percentage of the gravity load. Sections 503.3 and 503.4 and Sections 805.2 and 805.3 need to be satisfied and a higher gravity load threshold set in the proposed exception to Sections 503.4 and 805.3 should not be construed to nullify the lower dead load effects. There is no published data demonstrating that alterations involving the installation of rooftop solar photovoltaics caused a life-safety hazard due to a seismic event. It would be difficult to explain to a building owner that the installation of a rooftop solar system necessitates $2,000 or more in engineering costs to demonstrate that the DCR has not been exceeded. ASCE 7 as well as the IBC recognize that roof top solar voltaic systems are unique and allow seismic force resistance through friction and allow discounting of the roof live load under the rack-mounted assemblies.

This proposed code change offers a similar and reasonable accommodation to light weight components that are hand carried on to a roof and which can occupy a portion of the roof. The proposed exception is necessary since photovoltaic panel system and it's associated ballast are not considered mechanical equipment which are addressed in Section 503.4 and 805.3 exception 2. Note that exception 2 is added to Section 805.3 to be consistent with what was approved for Section 503.4 in EB54-21. Exception 2 was inadvertently not added to Section 805.3 during the 2019 code cycle, so an editorial edit is also being proposed to align the work area method with the prescriptive method in Chapter 5. The structural provisions are intended to be consistent between the prescriptive and work area method.

A definition for photovoltaic panel system adopted into the IBC is proposed to be added as a part of the proposed code change for clarity. Proponent submitted the proposed code change as EB56-19 concurrent with EB54-19 with the latter approved by the Structural Committee and adopted as exception 2 to Section 503.4. The committee did not approve EB 56-19 due to confusion with the goal in code change EB55-19 that addressed gravity load impacts.

Cost Impact: The code change proposal will decrease the cost of construction
The proposed code change will eliminate the need to develop detailed structural plans to demonstrate the capacity of the existing lateral force resisting system as well as constructing lateral force resisting system upgrades when installing photovoltaic panel systems. This will reduce the cost of construction by reducing the need for extensive engineering analysis.

Public Hearing Results

Committee Action **As Modified**

THIS CODE CHANGE WAS HEARD BY THE IBC-STRUCTURAL COMMITTEE.

Committee Modification:

2021 International Existing Building Code [BS]503.4 Existing structural elements carrying lateral load. Except as permitted by Section 503.13, where the *alteration* increases design lateral loads, results in a prohibited structural irregularity as defined in ASCE 7, or decreases the capacity of any existing lateral load-carrying structural element, the structure of the altered building or structure shall meet the requirements of Sections 1609 and 1613 of the International Building Code. Reduced seismic forces shall be permitted.

Exceptions:

1. Any existing lateral load-carrying structural element whose demand-capacity ratio with the alteration considered is not more than 10 percent greater than its demand-capacity ratio with the alteration ignored shall be permitted to remain unaltered. For purposes of calculating demand-capacity ratios, the demand shall consider applicable load combinations with design lateral loads or forces in accordance with Sections 1609 and 1613 of the *International Building Code*. Reduced seismic forces shall be permitted. For purposes of this exception, comparisons of demand-capacity ratios and calculation of design lateral loads, forces and capacities shall account for the cumulative effects of additions and alterations since original construction.
2. Buildings in which the increase in the demand-capacity ratio is due entirely to the addition of rooftop-supported mechanical equipment individually having an operating weight less than 400 pounds (181.4 kg) and where the total additional weight of all rooftop equipment placed after initial construction of the building is less than 10 percent of the roof dead load. For purposes of this exception, “roof” shall mean the roof level above a particular story.
3. ~~The~~ Increases in the demand-capacity ratio due to lateral loads from seismic forces need not be evaluated for the installation of rooftop *photovoltaic panel systems* where the additional roof dead load due to the system, including ballast where applicable, does not exceed 5 psf and does not exceed 10% of the dead load of the existing roof.

[BS]805.3 Existing structural elements resisting lateral loads. Except as permitted by Section 805.4, where the *alteration* increases design lateral loads, or where the alteration results in prohibited structural irregularity as defined in ASCE 7, or where the *alteration* decreases the capacity of any existing lateral load-carrying structural element, the structure of the altered building or structure shall meet the requirements of Sections 1609 and 1613 of the International Building Code. Reduced seismic forces shall be permitted.

Exception:

1. Any existing lateral load-carrying structural element whose demand-capacity ratio with the *alteration* considered is not more than 10 percent greater than its demand-capacity ratio with the *alteration* ignored shall be permitted to remain unaltered. For purposes of calculating demand-capacity ratios, the demand shall consider applicable load combinations with design lateral loads or forces in accordance with Sections 1609 and 1613 of the International Building Code. Reduced seismic forces shall be permitted. For purposes of this exception, comparisons of demand-capacity ratios and calculation of design lateral loads, forces and capacities shall account for the cumulative effects of *additions* and *alterations* since original construction.
2. Buildings in which the increase in the demand-capacity ratio is due entirely to the addition of rooftop-supported mechanical equipment individually having an operating weight less than 400 pounds (181.4 kg) and where the total additional weight of all rooftop equipment placed after initial construction of the building is less than 10 percent of the roof dead load. For purposes of this exception, “roof” shall mean the roof level above a particular story.
3. ~~The~~ Increases in the demand-capacity ratio due to lateral loads from seismic forces need not be evaluated for the installation of rooftop *photovoltaic panel systems* where the additional roof dead load due to the system, including ballast where applicable, does not exceed 5 psf and does not exceed 10% of the dead load of the existing roof.

Committee Reason: Approved as modified as this proposal provides a necessary exception from the applicability of the seismic forces for PV panel systems. The modification clarifies that both triggers need to apply and that this exception is only focused upon seismic forces. (Vote: 8-6)

Final Hearing Results	
EB64-22	AM

EB65-22

Original Proposal

IEBC: [BS] 503.5, [BS] 906.3

Proponents: David Bonowitz, David Bonowitz, S.E., FEMA-ATC Seismic Code Support Committee (dbonowitz@att.net); Kelly Cobeen, Wiss Janney Elstner Associates, Federal Emergency Management Agency/Applied Technology Council - Seismic Code Support Committee (kcobeen@wje.com); Michael Mahoney, FEMA, FEMA (mike.mahoney@fema.dhs.gov)

THIS CODE CHANGE WILL BE HEARD BY THE IBC-STRUCTURAL CODE COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THAT COMMITTEE.

2021 International Existing Building Code

Revise as follows:

[BS] 503.5 Seismic Design Category F. Where the *work area* exceeds 50 percent of the building area, and where the building is assigned to Seismic Design Category F, the structure of the altered building shall meet the requirements of Sections 1609 and 1613 of the International Building Code. Reduced seismic forces shall be permitted. Supports and attachments for nonstructural components serving any portion of the building with a use included in Risk Category IV shall comply with Section 1613 of the *International Building Code* or shall comply with ASCE 41 using an objective of Position Retention nonstructural performance with the BSE-1E earthquake hazard level.

[BS] 906.3 Seismic Design Category F. Where the building is assigned to Seismic Design Category F, the structure of the altered building shall meet the requirements of Sections 1609 and 1613 of the International Building Code. Reduced seismic forces shall be permitted. Supports and attachments for nonstructural components serving any portion of the building with a use included in Risk Category IV shall comply with Section 1613 of the *International Building Code* or shall comply with ASCE 41 using an objective of Position Retention nonstructural performance with the BSE-1E earthquake hazard level.

Reason: This proposal protects essential nonstructural systems and components in existing Risk Category IV buildings.
The fire stations, emergency operations centers, hospital emergency departments, and other facilities assigned to RC IV are especially reliant on the performance of nonstructural systems. Yet the current code, even in the rare cases where it triggers seismic upgrade, does not even require bracing of existing nonstructural components (let alone ruggedness to ensure functionality).

This proposal provides a basic level of protection, limited to the most crucial and cost-beneficial situations where structural retrofit is already triggered. It applies only to major (Level 3) alterations to buildings already assigned to RC IV *and* located in areas with very high seismicity (SDC F), where the code already requires a seismic structural evaluation and possibly a retrofit. This proposal would supplement the triggered structural work by including the nonstructural systems that keep the RC IV areas functional. In addition, consider its limited scope:

- Common alterations (Level 1 or Level 2) are exempt.
- RC IV buildings in areas of low, moderate, and even some high seismicity are exempt.
- Existing nonstructural systems that are not needed to serve the RC IV uses are exempt.
- Even where not exempt, reduced seismic design criteria are allowed, as is typical in the IEBC for alteration projects.
- By allowing reduced criteria, the proposal waives any retroactive certification or testing of the existing components themselves.

As is normal in the IEBC, “reduced” seismic criteria, represented by the specified ASCE 41 objective, are allowed for alteration triggers. (The code-based criteria are not reduced because there’s no simple way to do that except to say “pretend it’s a RC II building,” which would be confusing. So Section 1613 is allowed for those not yet familiar with ASCE 41, the national standard for seismic evaluation and retrofit, while those who practice in SDC F areas are most likely to be familiar already with ASCE 41.)

This proposal fills a gap in the code related to the expected performance of RC IV facilities, but it is consistent with other requirements related to the performance of these buildings. For reference and as precedents, consider:

- Current IEBC requirements for operational access to RC IV facilities affected by a change of occupancy (502.6 and 1103.3)
- ICC 500 requirements for storm shelter “critical support systems,” which requires an existing building to protect mechanical and

plumbing systems that support a storm shelter addition.

- IBC 1604.5.1 requirements for assigning risk category in buildings with multiple occupancies. Even if a portion of a building has no RC IV use itself, and even if it is structurally separated from any RC IV uses, it is still assigned to RC IV if it provides access, egress, or life safety systems to the RC IV portion.
- Damage to the new Olive View hospital in the Northridge earthquake. The structure did fine. Nonstructural failures shut down the hospital.
- Too many articles, white papers, and reports to name, all arguing that we need to take nonstructural systems more seriously.

The proposal makes matching edits to the Prescriptive and Work Area methods.

Notes on phrasing:

- “occupancy included in the risk category” is the phrasing already in Sec 1605.4.1.
- The proposal applies to nonstructural systems that “serve” RC IV uses within the building. This is similar to the “work area” concept, but it does not use that terminology because distributed nonstructural systems (HVAC, elevators) can be critical to the work area without actually being within it. Thus, the triggered scope might extend beyond the defined “work area” even if it does not involve the whole building.

Cost Impact: The code change proposal will increase the cost of construction
The proposal will increase costs only for RC IV facilities in very high seismic areas undergoing major alterations, and therefore already subject to structural retrofit. In addition, its scope and criteria are limited to minimize cost increases, as explained in the Reason Statement, and the proposal affects only nonstructural components that are deficient relative to the reduced criteria.

Public Hearing Results

Committee Action **As Submitted**

THIS CODE CHANGE WAS HEARD BY THE IBC-STRUCTURAL COMMITTEE.

Committee Reason: Approved as submitted as the proposal fills a gap in existing code language for nonstructural components in Risk Category IV buildings. This will improve building performance. (Vote: 14-0)

Final Hearing Results

EB65-22 AS

EB66-22

Original Proposal

IEBC: [BS] 503.11, [BS] 906.2

Proponents: David Bonowitz, David Bonowitz, S.E., FEMA-ATC Seismic Code Support Committee (dbonowitz@att.net); Kelly Cobeen, Wiss Janney Elstner Associates, Federal Emergency Management Agency/Applied Technology Council - Seismic Code Support Committee (kcobeen@wje.com); Michael Mahoney, FEMA, FEMA (mike.mahoney@fema.dhs.gov)

THIS CODE CHANGE WILL BE HEARD BY THE IBC-STRUCTURAL CODE COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THAT COMMITTEE.

2021 International Existing Building Code

Revise as follows:

[BS] 503.11 Substantial structural alteration. Where the *work area* exceeds 50 percent of the building area and where the work involves a *substantial structural alteration*, the lateral load-resisting system of the altered building shall satisfy the requirements of Sections 1609 and 1613 of the International Building Code. Reduced seismic forces shall be permitted. Where the building is assigned to Seismic Design Category D or F, supports and attachments for nonstructural components required to serve any portion of the building with a use included in Risk Category IV shall comply with Section 1613 of the *International Building Code* or shall comply with ASCE 41 using an objective of Position Retention nonstructural performance with the BSE-1E earthquake hazard level.

Exceptions:

1. Buildings of Group R occupancy with not more than five dwelling or sleeping units used solely for residential purposes that are altered based on the conventional light-frame construction methods of the *International Building Code* or in compliance with the provisions of the *International Residential Code*.
2. Where the intended *alteration* involves only the lowest story of a building, ~~only the~~ structural components of the lateral load-resisting system above ~~components in and below~~ that story need not comply with this section.

[BS] 906.2 Existing structural elements resisting lateral loads. Where the work involves a *substantial structural alteration*, the lateral load-resisting system of the altered building shall be shown to satisfy the requirements of Sections 1609 and 1613 of the International Building Code. Reduced seismic forces shall be permitted. Where the building is assigned to Seismic Design Category D or F, supports and attachments for nonstructural components required to serve any portion of the building with a use included in Risk Category IV shall comply with Section 1613 of the *International Building Code* or shall comply with ASCE 41 using an objective of Position Retention nonstructural performance with the BSE-1E earthquake hazard level.

Exceptions:

1. Buildings of Group R occupancy with not more than five dwelling or sleeping units used solely for residential purposes that are altered based on the conventional light-frame construction methods of the *International Building Code* or in compliance with the provisions of the *International Residential Code*.
2. Where the intended alteration involves only the lowest story of a building, ~~only the~~ structural components of the lateral load resisting system above ~~components in and below~~ that story need not comply with this section.

Reason:

This proposal protects essential nonstructural systems and components in existing Risk Category IV buildings.

The fire stations, emergency operations centers, hospital emergency departments, and other facilities assigned to RC IV are especially reliant on the performance of nonstructural systems. Yet the current code, even in the rare cases where it triggers seismic upgrade, does not even require bracing of existing nonstructural components (let alone ruggedness to ensure functionality).

This proposal provides a basic level of protection, limited to the most crucial and cost-beneficial situations where structural retrofit is already triggered. It applies only to major (Level 3) alterations to buildings already assigned to RC IV and located in areas with moderate or high

seismicity (SDC D or F), where the code already requires a seismic structural evaluation and possibly a retrofit. This proposal would supplement the triggered structural work by including the nonstructural systems that keep the RC IV areas functional. In addition, consider its limited scope:

- Common alterations (Level 1 or Level 2) are exempt.
- Nonstructural alteration projects are exempt, as the proposal applies only where there is an intended substantial structural alteration.
- RC IV buildings in areas of low seismicity are exempt.
- Existing nonstructural systems that are not needed to serve the RC IV uses are exempt.
- Even where not exempt, reduced seismic design criteria are allowed, as is typical in the IEBC for alteration projects.
- By allowing reduced criteria, the proposal waives any retroactive certification or testing of the existing components themselves.

As is normal in the IEBC, “reduced” seismic criteria, represented by the specified ASCE 41 objective, are allowed for alteration triggers. (The code- based criteria are not reduced because there’s no simple way to do that except to say “pretend it’s a RC II building,” which would be confusing. So Section 1613 is allowed for those not yet familiar with ASCE 41, the national standard for seismic evaluation and retrofit, while those who practice in SDC D-F areas are most likely to be familiar already with ASCE 41.)

This proposal fills a gap in the code related to the expected performance of RC IV facilities, but it is consistent with other requirements related to the performance of these buildings. For reference and as precedents, consider:

- Current IEBC requirements for operational access to RC IV facilities affected by a change of occupancy (502.6 and 1103.3)
- ICC 500 requirements for storm shelter “critical support systems,” which requires an existing building to protect mechanical and plumbing systems that support a storm shelter addition.
- IBC 1604.5.1 requirements for assigning risk category in buildings with multiple occupancies. Even if a portion of a building has no RC IV use itself, and even if it is structurally separated from any RC IV uses, it is still assigned to RC IV if it provides access, egress, or life safety systems to the RC IV portion.
- Damage to the new Olive View hospital in the Northridge earthquake. The structure did fine. Nonstructural failures shut down the hospital.
- Too many articles, white papers, and reports to name, all arguing that we need to take nonstructural systems more seriously.

In addition to its main purpose, the proposal makes a necessary edit to one of the exceptions to clarify that it applies only to the structural part of the trigger. This exception cannot apply to the proposed nonstructural trigger, since nonstructural systems are commonly located on the roof or in a mechanical room separate from the work area.

The proposal makes matching edits to the Prescriptive and Work Area methods. Notes on phrasing:

- “occupancy included in the risk category” is the phrasing already in Sec 1605.4.1.
- The proposal applies to nonstructural systems required to “serve” RC IV uses within the building. This is similar to the “work area” concept, but it does not use that terminology because distributed nonstructural systems (HVAC, elevators) can be critical to the work area without actually being within it. Thus, the triggered scope might extend beyond the defined “work area” even if it does not involve the whole building.

Cost Impact: The code change proposal will increase the cost of construction
The proposal will increase costs for RC IV facilities in moderate and high seismic areas undergoing major alterations AND substantial structural alterations. In addition, its scope and criteria are limited to minimize cost increases, as explained in the Reason Statement, and the proposal affects only nonstructural components that are deficient relative to the reduced criteria.

Public Hearing Results

Committee Action **As Submitted**

THIS CODE CHANGE WAS HEARD BY THE IBC-STRUCTURAL COMMITTEE.

Committee Reason: Approved as submitted consistent with the committee action on EB65. This will improve building performance. (Vote: 14-0)

Final Hearing Results

EB66-22 AS

EB67-22

Original Proposal

IEBC: [BS] 503.12, [BS] 706.3.2, [BS] C201.1

Proponents: Michael Fillion, National Council of Structural Engineers Associations (mrf.structure@verizon.net); Don Scott, ASCE 7 Wind Load Subcommittee (dscott@pcs-structural.com)

THIS CODE CHANGE WILL BE HEARD BY THE IBC-STRUCTURAL CODE COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THAT COMMITTEE.

2021 International Existing Building Code

Revise as follows:

[BS] 503.12 Roof diaphragms resisting wind loads in high-wind regions. Where the intended *alteration* requires a permit for reroofing and involves removal of roofing materials from more than 50 percent of the roof diaphragm of a building or section of a building located where the ~~ultimate design~~ basic wind speed,V, is greater than 130 mph (58 m/s) in accordance with Figure 1609.3(1) of the International Building Codefor Risk Category II, roof diaphragms, connections of the roof diaphragm to roof framing members, and roof-to-wall connections shall be evaluated for the wind loads specified in Section 1609 of the International Building Code, including wind uplift. If the diaphragms and connections in their current condition are not capable of resisting 75 percent of those wind loads, they shall be replaced or strengthened in accordance with the loads specified in Section 1609 of the International Building Code.

Exception: Buildings that have been demonstrated to comply with the wind load provisions in ASCE 7—88 or later editions.

[BS] 706.3.2 Roof diaphragms resisting wind loads in high-wind regions. Where roofing materials are removed from more than 50 percent of the roof diaphragm or section of a building located where the ~~ultimate design~~ basic wind speed, ~~V_{ult}~~, V, is greater than 130 mph (58 m/s)~~determined~~ in accordance with Figure 1609.3(1) of the International Building Codefor Risk Category II, i~~s greater than 130 mph (58 m/s),~~ roof diaphragms, connections of the roof diaphragm to roof framing members, and roof-to-wall connections shall be evaluated for the wind loads specified in the *International Building Code*, including wind uplift. If the diaphragms and connections in their current condition are not capable of resisting 75 percent of those wind loads, they shall be replaced or strengthened in accordance with the loads specified in the *International Building Code.*

Exception: Buildings that have been demonstrated to comply with the wind load provisions in ASCE 7—88 or later editions.

[BS] C201.1 Purpose. This chapter provides prescriptive methods for partial structural retrofit of an *existing building* to increase its resistance to wind loads. It is intended for voluntary use where the ~~ultimate design~~ basic wind speed, ~~V_{ult}~~, V, is greater than 130 mph (58 m/s) ~~determined~~ in accordance with Figure 1609.3(1) of the International Building Codefor Risk Category II,~~exceeds 130 mph (58 m/s)~~ and for reference by mitigation programs. The provisions of this chapter do not necessarily satisfy requirements for new construction. Unless specifically cited, the provisions of this chapter do not necessarily satisfy requirements for structural improvements triggered by *addition, alteration, repair, change of occupancy*, building relocation or other circumstances.

Reason: Editorial changes to align the wind speed description consistent with ASCE 7 and the*International Building Code.*

Cost Impact: The code change proposal will not increase or decrease the cost of construction
The code change proposal is editorial.

Public Hearing Results

Committee Action **As Modified**

THIS CODE CHANGE WAS HEARD BY THE IBC-STRUCTURAL COMMITTEE.

Committee Modification: 2021 International Existing Building Code

[BS]503.12 Roof diaphragms resisting wind loads in high-wind regions. Where the intended *alteration* requires a permit for reroofing and involves removal of roofing materials from more than 50 percent of the roof diaphragm of a building or section of a building located where the basic wind speed ,V, is greater than 130 mph (58 m/s) in accordance with Figure 1609.3(2~~1~~) of the International Building Code ~~for Risk Category II~~, roof diaphragms, connections of the roof diaphragm to roof framing members, and roof-to-wall connections shall be evaluated for the wind loads specified in Section 1609 of the International Building Code, including wind uplift. If the diaphragms and connections in their current condition are not capable of resisting 75 percent of those wind loads, they shall be replaced or strengthened in accordance with the loads specified in Section 1609 of the International Building Code.

Exception: Buildings that have been demonstrated to comply with the wind load provisions in ASCE 7—88 or later editions.

[BS]706.3.2 Roof diaphragms resisting wind loads in high-wind regions. Where roofing materials are removed from more than 50 percent of the roof diaphragm or section of a building located where the basic wind speed, V, is greater than 130 mph (58 m/s) in accordance with Figure 1609.3(2~~1~~) of the International Building Code~~for Risk Category II~~, roof diaphragms, connections of the roof diaphragm to roof framing members, and roof-to-wall connections shall be evaluated for the wind loads specified in the *International Building Code*, including wind uplift. If the diaphragms and connections in their current condition are not capable of resisting 75 percent of those wind loads, they shall be replaced or strengthened in accordance with the loads specified in the *International Building Code.*

Exception: Buildings that have been demonstrated to comply with the wind load provisions in ASCE 7—88 or later editions.

[BS]C201.1 Purpose. This chapter provides prescriptive methods for partial structural retrofit of an*existing building* to increase its resistance to wind loads. It is intended for voluntary use where the basic wind speed, V, is greater than 130 mph (58 m/s) in accordance with Figure 1609.3(2~~1~~) of the International Building Code ~~for Risk Category II~~, and for reference by mitigation programs. The provisions of this chapter do not necessarily satisfy requirements for new construction. Unless specifically cited, the provisions of this chapter do not necessarily satisfy requirements for structural improvements triggered by *addition, alteration, repair, change of occupancy*, building relocation or other circumstances.

Committee Reason: Approved as modified as a needed change to align with appropriate terminology. This provides updates to the appropriate figure while keeping the same Risk Category as existing code wording. The modification updates the reference to the correct figure and appropriately deletes the reference to a specific Risk Category. (Vote:10-4)

Final Hearing Results

EB67-22 AM

EB68-22

Original Proposal

IEBC: [BS] 503.13, [BS] 805.4

Proponents: David Bonowitz, David Bonowitz, S.E., FEMA-ATC Seismic Code Support Committee (dbonowitz@att.net); Kelly Cobeen, Wiss Janney Elstner Associates, Federal Emergency Management Agency/Applied Technology Council - Seismic Code Support Committee (kcobeen@wje.com); Michael Mahoney, FEMA, FEMA (mike.mahoney@fema.dhs.gov)

THIS CODE CHANGE WILL BE HEARD BY THE IBC-STRUCTURAL CODE COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THAT COMMITTEE.

2021 International Existing Building Code

Revise as follows:

[BS] 503.13 Voluntary lateral force-resisting system alterations. Structural *alterations* that are intended exclusively to improve the lateral force-resisting system and are not required by other sections of this code shall not be subject to the structural requirements of Section 503 ~~required to meet the requirements of Section 1609 or 1613 of the International Building Code~~, provided that all of the following apply:

1. With the alteration complete, the ~~The~~ capacity of existing structural systems to resist forces is not reduced.
2. New structural elements are detailed and connected to existing or new structural elements as required by the selected design criteria ~~*International Building Code* for new construction~~.
3. Supports and attachments for ~~New or relocated~~ nonstructural elements removed and reinstalled to facilitate the work comply with ~~are detailed and connected to existing or new structural elements as required by~~ the *International Building Code* for new construction.
4. The *alterations* do not create a structural irregularity as defined in ASCE 7 or make an existing structural irregularity more severe.

[BS] 805.4 Voluntary lateral force-resisting system alterations. Structural *alterations* that are intended exclusively to improve the lateral force-resisting system and are not required by other sections of this code shall not be subject to the structural requirements of this chapter or Chapter 7 ~~required to meet the requirements of Section 1609 or Section 1613 of the International Building Code~~, provided that the following conditions are met:

1. With the alteration complete, the ~~The~~ capacity of existing structural systems to resist forces is not reduced.
2. New structural elements are detailed and connected to existing or new structural elements as required by the selected design criteria ~~*International Building Code* for new construction~~.
3. Supports and attachments for ~~New or relocated~~ nonstructural elements removed and reinstalled to facilitate the work comply with ~~are detailed and connected to existing or new structural elements as required by~~ the *International Building Code* for new construction.
4. The *alterations* do not create a structural irregularity as defined in ASCE 7 or make an existing structural irregularity more severe.

Reason: This proposal makes clarifying edits and recognizes that voluntary retrofit criteria need not be (and usually is not) the same as IBC Section 1609 or Section 1613 criteria for new construction.

In the main provision, the proposal replaces obsolete wording. The current wording suggests that IEBC alteration provisions would normally require a building to “meet the requirements of Section 1609 or 1613 of the [IBC],” but that is not the case. Typically, the IEBC does not trigger any lateral system upgrade for alteration projects, and where it does, it allows alternative criteria in Section 304.3. Therefore, what’s really being waived is not compliance with the IBC, but compliance with the various triggers in the alteration section (or chapter, for the Work Area method).

In Item 1, the proposal clarifies that existing capacity can be reduced by removing certain elements, as long as that capacity is replaced by new retrofit elements.

In Item 2, the proposal recognizes that selected retrofit criteria can be different from the code for new construction. In particular, retrofit criteria such as ASCE 41 recognize that connections of retrofit elements need only develop the strength of critical load path elements, which might be less than what the IBC might require for new construction.

In item 3, the scope is clarified to apply to nonstructural elements that are removed and reinstalled to facilitate the structural retrofit. Components provided new or relocated for other reasons are outside the scope of this provision, which is meant for work “intended exclusively to improve the [LFRS].”

The proposal makes matching requirements to the Prescriptive and Work Area methods.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
The proposal merely clarifies what is already the current understanding of these sections. Also, these sections apply only to voluntary work.

Public Hearing Results

Committee Action **As Submitted**

THIS CODE CHANGE WAS HEARD BY THE IBC-STRUCTURAL COMMITTEE.

Committee Reason: Approved as submitted as a clarification of intent and scope. Since this is for voluntary lateral force-resisting system alterations, this proposal provides clarification as to where the IBC is to be utilized. (Vote: 14-0)

Final Hearing Results

EB68-22 AS

EB69-22

Original Proposal

IEBC: [BS] 503.13, [BS] 805.4

Proponents: Michael Fillion, National Council of Structural Engineers Associations (mrf.structure@verizon.net)

THIS CODE CHANGE WILL BE HEARD BY THE IBC-STRUCTURAL CODE COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THAT COMMITTEE.

2021 International Existing Building Code

Revise as follows:

[BS] 503.13 Voluntary lateral force-resisting system alterations. Structural *alterations* that are intended exclusively to improve the lateral force-resisting system and are not required by other sections of this code shall not be required to meet the requirements of Section 1609 or 1613 of the International Building Code, provided that all of the following apply:

1. The capacity of existing structural systems to resist forces is not reduced.
2. New structural elements are detailed and connected to existing or new structural elements as required by the *International Building Code* for new construction.
3. New or relocated nonstructural elements are detailed and connected to existing or new structural elements as required by the *International Building Code* for new construction.
4. The *alterations* do not create a structural irregularity as defined in ASCE 7 or make an existing structural irregularity more severe.

   Exception: Where alterations create a structural irregularity or make an existing structural irregularity more severe, the irregularity is permitted provided the altered building complies with Section 304.3.2 Item 3 and Table 304.3.2 using ASCE 41 Tier 3 procedures.

[BS] 805.4 Voluntary lateral force-resisting system alterations. Structural *alterations* that are intended exclusively to improve the lateral force-resisting system and are not required by other sections of this code shall not be required to meet the requirements of Section 1609 or Section 1613 of the International Building Code, provided that the following conditions are met:

1. The capacity of existing structural systems to resist forces is not reduced.
2. New structural elements are detailed and connected to existing or new structural elements as required by the *International Building Code* for new construction.
3. New or relocated nonstructural elements are detailed and connected to existing or new structural elements as required by the *International Building Code* for new construction.
4. The *alterations* do not create a structural irregularity as defined in ASCE 7 or make an existing structural irregularity more severe.

   Exception: Where alterations create a structural irregularity or make an existing structural irregularity more severe, the irregularity is permitted provided the altered building complies with Section 304.3.2 Item 3 and Table 304.3.2 using ASCE 41 Tier 3 procedures.

Reason: Clarifies requirements for structural alterations based on 2018 SEAOC survey. Reference the attached conference paper (Zepeda et al, 2019). During discussions regarding the responses to Question 4, questions were raised as to why introduction of irregularities that would be permitted in accordance with ASCE 7 would prohibit structural alterations if ASCE 41 were used to explicitly evaluated such irregularities.

Revisions made by this proposal intend to clarify that it is permitted to make existing structural irregularities more severe, and introduce new structural irregularities as part of voluntary seismic improvements, provided the altered building complies with ASCE 41 BPOE performance objectives under a full Tier 3 evaluation.

https://www.cdpaccess.com/proposal/8703/25651/files/download/3153/

Bibliography: Zepeda, D., Hagen, G., O'Connell, K., McLellan, R., Buckalew, J., and Sumer, A., "Existing Buildings and the "10% Rule": Survey Results, Opinions, and Recommendations." 2019 SEAOC Convention Proceedings (pp. 116-147), Sacramento, CA: Structural Engineers Association of California.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
The intent of this code change proposal is for clarification. As it does not change the intent of the code, it will not increase of decrease the cost of construction.

Public Hearing Results

Committee Action **As Modified**

THIS CODE CHANGE WAS HEARD BY THE IBC-STRUCTURAL COMMITTEE.

Committee Modification: 2021 International Existing Building Code

[BS]503.13 Voluntary lateral force-resisting system alterations. Structural *alterations* that are intended exclusively to improve the lateral force-resisting system and are not required by other sections of this code shall not be required to meet the requirements of Section 1609 or 1613 of the International Building Code, provided that all of the following apply:

1. The capacity of existing structural systems to resist forces is not reduced.
2. New structural elements are detailed and connected to existing or new structural elements as required by the *International Building Code* for new construction.
3. New or relocated nonstructural elements are detailed and connected to existing or new structural elements as required by the *International Building Code* for new construction.
4. The *alterations* do not create a structural irregularity as defined in ASCE 7 or make an existing structural irregularity more severe.

   Exception: ~~Where alterations create a structural irregularity or make an existing structural irregularity more severe, the irregularity is permitted provided the altered building~~ Condition 4 need not be satisfied where the work complies with Section 304.3.2 Item 3 ~~and Table 304.3.2 using ASCE 41 Tier 3 procedures~~.

[BS]805.4 Voluntary lateral force-resisting system alterations. Structural *alterations* that are intended exclusively to improve the lateral force-resisting system and are not required by other sections of this code shall not be required to meet the requirements of Section 1609 or Section 1613 of the International Building Code, provided that the following conditions are met:

1. The capacity of existing structural systems to resist forces is not reduced.
2. New structural elements are detailed and connected to existing or new structural elements as required by the *International Building Code* for new construction.
3. New or relocated nonstructural elements are detailed and connected to existing or new structural elements as required by the *International Building Code* for new construction.
4. The *alterations* do not create a structural irregularity as defined in ASCE 7 or make an existing structural irregularity more severe.

   Exception: ~~Where alterations create a structural irregularity or make an existing structural irregularity more severe, the irregularity is permitted provided the altered building~~ Condition 4 need not be satisfied where the work complies with Section 304.3.2 Item 3 ~~and Table 304.3.2 using ASCE 41 Tier 3 procedures~~.

Committee Reason: Approved as modified as the exception is needed to fill the gap relative to structural irregularity for voluntary lateral force-resisting system alterations. The modification simplifies the flow of the section. (Vote: 13-0)

Final Hearing Results

EB69-22 AM

EB70-22

Original Proposal

IEBC: [BS] 503.13, [BS] 805.4

Proponents: Nathalie Boeholt, Seattle Department of Construction and Inspections, Washington Association of Building Officials Technical Code Development Committee; Micah Chappell, Seattle Department of Construction and Inspections, Washington Association of Building Officials Technical Code Development Committee (micah.chappell@seattle.gov)

THIS CODE CHANGE WILL BE HEARD BY THE IBC-STRUCTURAL CODE COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THAT COMMITTEE.

2021 International Existing Building Code

Revise as follows:

[BS] 503.13 Voluntary lateral force-resisting system alterations. Structural *alterations* that are intended exclusively to improve the lateral force-resisting system and are not required by other sections of this code shall not be required to meet the requirements of Section 1609 or 1613 of the International Building Code, provided that all of the following apply:

1. The capacity of existing structural systems to resist forces is not reduced.
2. New structural elements are detailed and connected to existing or new structural elements as required by the *International Building Code* for new construction.

   Exception: New lateral force-resisting systems designed in accordance with the International Building Code are permitted to be of a type designated as "Ordinary" or "Intermediate" where ASCE 7 Table 12.2-1 states these types of systems are not permitted.

3. New or relocated nonstructural elements are detailed and connected to existing or new structural elements as required by the *International Building Code* for new construction.
4. The *alterations* do not create a structural irregularity as defined in ASCE 7 or make an existing structural irregularity more severe.

[BS] 805.4 Voluntary lateral force-resisting system alterations. Structural *alterations* that are intended exclusively to improve the lateral force-resisting system and are not required by other sections of this code shall not be required to meet the requirements of Section 1609 or Section 1613 of the International Building Code, provided that the following conditions are met:

1. The capacity of existing structural systems to resist forces is not reduced.
2. New structural elements are detailed and connected to existing or new structural elements as required by the *International Building Code* for new construction.

   Exception: New lateral force-resisting systems designed in accordance with the International Building Code are permitted to be of a type designated as "Ordinary" or "Intermediate" where ASCE 7 Table 12.2-1 states these types of systems are not permitted.

3. New or relocated nonstructural elements are detailed and connected to existing or new structural elements as required by the *International Building Code* for new construction.
4. The *alterations* do not create a structural irregularity as defined in ASCE 7 or make an existing structural irregularity more severe.

Reason: Sections 503.13 and 805.4 indicate that voluntary lateral force-resisting system alterations are not required to meet the requirements of Section 1609 or 1613 of the International Building Code, provided that 4 conditions are met. Condition #2 requires that new structural elements are detailed and connected as required by the International Building Code for new construction. This has led to some confusion amongst the design and the plan review communities when it comes to selecting the lateral force-resisting systems from ASCE 7 Table 12.2-1. It is unclear what portions of the International Building Code are not required to be met and what portions shall be met.

Very often, existing buildings needing seismic upgrades are older and have lateral force-resisting systems such as ordinary reinforced concrete or masonry walls or unreinforced masonry walls. These systems, typically designed with older codes, are often under-reinforced per today's codes or not reinforced at all. In an earthquake, they will behave very rigidly which can lead to early failure and possibly early collapse. This has been witnessed in past earthquakes, such as the Nisqually Earthquake of 2001 in the Seattle area, where many unreinforced masonry walls cracked and crumbled. When a seismic upgrade is proposed, it is important to provide new systems that will match the existing building's rigidity as much as possible to prevent excessive displacements which can lead to the failure of the more rigid and older systems. If a very flexible system such as a special steel moment frame is proposed, it will be able to deform quite a bit more than the existing older system which can lead to more deformation than the existing building can handle. The purpose of this proposal is to avoid situations like these and help building officials enforce more adequate seismic upgrades by allowing systems that are not normally allowed in new construction.

For example, in Seismic Design Category D, if 4-story concentrically braced frames of a height exceeding 35 feet are proposed for a voluntary seismic upgrade in an existing unreinforced masonry wall building and must be detailed and connected for new construction, per condition #2, then an engineer may deduce that only the "Special" type is allowed per ASCE 7 Table 12.2-1. The code required design and detailing of an "Ordinary" and "Special" concentrically braced frame for new construction are very different. It is agreed that the lateral force-resisting system detailing shall be per current codes for that system, but the term "new construction" is confusing and leads to think that the new system shall meet all the requirements of ASCE 7 Table 12.2-1. With the proposed exception, a more rigid "Ordinary" concentrically braced frame that is not normally allowed in Seismic Design Category D, would be allowed in this example, and would provide better deformation compatibility with the existing building. These "Ordinary" braced frames would be more adequate at providing overall increased seismic resistance because they are a more rigid system than "Special" braced frames, they would "attract" more load and therefore be more efficient at "taking" load away from the existing unreinforced masonry walls.

This proposal will make it clear that new lateral systems are permitted to be of any type, even of a type that normally would not be allowed in new construction, based on the seismic design category and height, as long as all the other conditions of sections 503.13 and 805.4 are met. The original intent of this code section remains the same, the proposed design shall not weaken the existing lateral resistance of the building or affect the behavior of the building in a severe way. In addition, this proposal will help with cost reduction and most importantly performance since less ductile "Ordinary" or "Intermediate" systems may be closer to matching an existing building's deformation limits.

Cost Impact: The code change proposal will decrease the cost of construction
This code change proposal will reduce the cost of construction for the following reasons. Clarifying that a new lateral force-resisting system can be of a type designated as "Ordinary" or "Intermediate" instead of "Intermediate" or "Special" in a voluntary seismic upgrade will prevent the specification of more expensive systems (i.e. "Special"). A "Special" lateral force-resisting system is more expensive because it requires additional material, additional fabrication (including special welding), additional special inspections and added time and complexity during construction. All these costs add up.

Public Hearing Results

Committee Action **As Submitted**

THIS CODE CHANGE WAS HEARD BY THE IBC-STRUCTURAL COMMITTEE.

Committee Reason: Approved as submitted as this provides needed flexibility to voluntary upgrades. The committee did note that the wording of the exception could be cleaner. (Vote:10-2)

Final Hearing Results

EB70-22 AS

EB71-22

Original Proposal

IEBC: SECTION 202 (New), 503.15, 804.11

Proponents: John Williams, Committee on Healthcare (ahc@iccsafe.org)

2021 International Existing Building Code

Add new definition as follows:

AMBULATORY CARE FACILITY. Buildings or portions thereof used to provide medical, surgical, psychiatric, nursing or similar care on a less than 24-hour basis to persons who are rendered incapable of self-preservation by the services provided or staff has accepted responsibility for care recipients already incapable.

Revise as follows:

503.15 Refuge areas. Where *alterations* affect the configuration of an area utilized as a refuge area, the capacity of the refuge area shall not be reduced below the required capacity of the refuge area for horizontal exits in accordance with Section 1026.4 of the *International Building Code*.

Where the horizontal exit also forms a smoke compartment, the capacity of the refuge area for Group I-1, I-2 and I-3 occupancies and ~~Group B~~ ambulatory care *facilities* shall not be reduced below that required in Sections 407.5.3, 408.6.2, 420.6.1 and 422.3.2 of the *International Building Code,* as applicable.

804.11 Refuge areas. Where *alterations* affect the configuration of an area utilized as a refuge area, the capacity of the refuge area shall not be reduced below the required capacity of the refuge area for horizontal exits in accordance with Section 1026.4 of the *International Building Code*. Where the horizontal exit also forms a smoke compartment, the capacity of the refuge area for Group I-1, I-2 and I-3 occupancies and ~~Group B~~ ambulatory care *facilities* shall not be reduced below that required in Sections 407.5.3, 408.6.2, 420.6.1 and 422.3.2 of the *International Building Code*, as applicable.

Reason: The definition proposed is the same definition used in the IBC. It is hoped that this definition can be scoped to the General committee so they will remain consistent.

The 'Group B' as part of 'ambulatory care' was utilized when this subject was originally added in the the I-codes. Removing this is no change to technical criteria, and would make these sections consistent with Sections 406.1.4, 408.3, 501.3, 707.1, 806.3, and 808.1.

This proposal is submitted by the Committee on Healthcare (CHC). The CHC was established by the ICC Board to evaluate and assess contemporary code issues relating to healthcare facilities. This is a joint effort between ICC and the American Society for Healthcare Engineering (ASHE), a subsidiary of the American Hospital Association, to eliminate duplication and conflicts in healthcare regulation. In 2020 and 2021 of the committees as well as any interested parties, to discuss and debate the proposed changes. Information on the CHC, including: meeting agendas; minutes; reports; resource documents; presentations; and all other materials developed in conjunction with the CHC effort can be downloaded from the CHC website at https://www.iccsafe.org/products-and-services/i-codes/code-development/cs/icc-committee-on-healthcare/.

Cost Impact: The code change proposal will not increase or decrease the cost of construction

This proposal is merely making the same revisions as made to the IBC. The use of the term "Group B" is not necessary and does not change the application of the code. The use of the definition is provided to assist in code application and will not change the cost of compliance. It is the same definition as used in the IBC.

Public Hearing Results

Committee Action **As Submitted**

Committee Reason: This proposal was approved based upon the first paragraph of the proponent's reason statement. (Vote: 14-0)

Final Hearing Results

EB71-22 AS

EB72-22

Original Proposal

IEBC: 503.16 (New), 503.16.1 (New), 902.2 (New), 902.2.1 (New)

Proponents: John Williams, Committee on Healthcare (ahc@iccsafe.org)

2021 International Existing Building Code

Add new text as follows:

503.16 Conditions for I-1 Occupancies. Group I-1 Occupancies that are being altered and where the work area is greater than 50 percent of the aggregate building area, shall be classified as Condition 1 or Condition 2 in accordance with Section 308.2 of the International Building Code.

503.16.1 Smoke Barriers in Group I-1, Condition 2. In Group I-1, Condition 2 occupancies where the work area is on a story used for sleeping rooms for more than 30 care recipients, the story shall be divided into not less than two compartments by smoke barrier walls in accordance with Section 420.6 of the International Building Code.

902.2 Conditions for I-1 Occupancies. Group I-1 Occupancies shall be classified as Condition 1 or Condition 2 in accordance with Section 308.2 of the International Building Code.

902.2.1 Smoke Barriers in Group I-1, Condition 2. In Group I-1, Condition 2 occupancies where the work area is on a story used for sleeping rooms for more than 30 care recipients, the story shall be divided into not less than two compartments by smoke barrier walls in accordance with Section 420.6 of the International Building Code.

Reason: The intent of this proposal is to specify where an existing Group I-1 would need to subdivide into smoke compartments similar to Section 420.6 in the IBC.

Prior to changes to the 2015 I-Codes, many Assisted Living communities were already operating as I-1 Occupancies, without having a Condition 1 or Condition 2 declaration. A clear requirement is needed for when these buildings would need to declare a Condition and meet the current code requirements for Smoke Barriers and Sprinklers. This code change sets the threshold at a Level 3 Alteration (greater than 50% of the aggregate building area), because that level of work equates to a larger expenditure level, and it matches the requirements already in Section 904 requiring upgraded fire protection for I-2 occupancies.

Many Assisted Living and Memory care communities operate on very slim budgets. These communities should be able to operate as they currently are, and make certain cosmetic renovations to their building without triggering the current code requirements of a Condition 1 or Condition 2, Group I-1 Occupancy. However, once they reach the Level 3 alteration threshold (renovation of 50% of building) they must declare a condition, and if they choose Condition 2, they must add smoke barriers in the work area. The requirement to add sprinklers in the work area is already contained in Section 904.1.4 of the IEBC.

This proposal is submitted by the Committee on Healthcare (CHC). The CHC was established by the ICC Board to evaluate and assess contemporary code issues relating to healthcare facilities. This is a joint effort between ICC and the American Society for Healthcare Engineering (ASHE), a subsidiary of the American Hospital Association, to eliminate duplication and conflicts in healthcare regulation. In 2020 and 2021 of the committees as well as any interested parties, to discuss and debate the proposed changes. Information on the CHC, including: meeting agendas; minutes; reports; resource documents; presentations; and all other materials developed in conjunction with the CHC effort can be downloaded from the CHC website at https://www.iccsafe.org/products-and-services/i-codes/code-development/cs/icc-committee-on-healthcare/.

Cost Impact: The code change proposal will increase the cost of construction

This proposal would required the addition of a smoke barrier in Group I-1 undergoing a Level 3 alteration. The 2021 IEBC does not require that existing Group I-1 occupancies must upgrade to providing smoke compartments when alterations are undertaken.

Public Hearing Results

Committee Action **As Submitted**

Committee Reason: This proposal, which will require smoke barriers for existing Group I-1 Condition occupancies, was approved as is strikes the appropriate balance of maintaining life safety while not being onerous for those undertaking small additions or alterations. (Vote: 13-1)

Final Hearing Results

EB72-22 AS

EB73-22

Original Proposal

IEBC: 503.16 (New), 902.3 (New)

Proponents: John Williams, Committee on Healthcare (ahc@iccsafe.org)

2021 International Existing Building Code

Add new text as follows:

503.16 Ambulatory care facilities. Where a work area exceeds 50 percent of the building area the and work area includes an existing ambulatory care facility, the following shall be provided:

1. A smoke compartment in accordance with Section 422.3 of the International Building Code where the alteration results in an ambulatory care facility greater than 10,000 square feet on one story.
2. Separation from adjacent spaces in accordance with Section 422.2 of the International Building Code, where any such facility has the potential for four or more care recipients are to be incapable of self-preservation at any time.

902.3 Ambulatory care facilities.. Where a Level 3 work area includes an existing ambulatory care facility, the following shall be provided:

1. A smoke compartment in accordance with Section 422.3 of the International Building Code where the alteration results in an ambulatory care facility greater than 10,000 square feet on one story.
2. Separation from adjacent spaces in accordance with Section 422.2 of the International Building Code, where any such facility has the potential for four or more care recipients are to be incapable of self-preservation at any time.

Reason: This code change intends to address ambulatory care facilities in building where a substantial renovation is occurring. Ambulatory care presents a substantially different set of risks from a normal group B occupancy. To ensure that existing facilities in existing building address some of these unique risk, we are proposing that when there is a 50%/level 3 alteration of a building, and that alteration includes an existing ambulatory care facility, that users of the code are prompted to review two key aspects of the building code. The thresholds to add these requirements are the same as the building code requirement (10,000 square feet to add smoke compartment and 4 people incapable to add separation). Practically, existing care facilities that are certified through Medicare will already have these requirements. A subset of existing facilities will not, and since the special requirements in Chapter 4 of the building code did not exist prior to the 2009 version, these will require upgrade. The CHC considered several different thresholds to require upgrades. For Group I-2 facilities, smoke compartmentation is required at Level 2 alterations. Ambulatory care facilities are often located in multi-tenant buildings where other tenants could be impacted, so we are suggesting these requirements be triggered by a higher threshold.
This proposal is submitted by the Committee on Healthcare (CHC). The CHC was established by the ICC Board to evaluate and assess contemporary code issues relating to healthcare facilities. This is a joint effort between ICC and the American Society for Healthcare Engineering (ASHE), a subsidiary of the American Hospital Association, to eliminate duplication and conflicts in healthcare regulation. In 2020 and 2021 of the committees as well as any interested parties, to discuss and debate the proposed changes. Information on the CHC, including: meeting agendas; minutes; reports; resource documents; presentations; and all other materials developed in conjunction with the CHC effort can be downloaded from the CHC website at https://www.iccsafe.org/products-and-services/i-codes/code-development/cs/icc-committee-on-healthcare/.

Cost Impact: The code change proposal will increase the cost of construction
While many existing facilities will already have separation and smoke compartmentation, some will require adding these features which will increase the cost of compliance for some facilities that must upgrade or add smoke barrier separations. .

Public Hearing Results

Committee Action **As Submitted**

Committee Reason: This proposal strikes the correct balance between providing upgraded safety but only when the alteration is more substantial within an existing ambulatory care facility. (Vote: 13-1)

Final Hearing Results

EB73-22 AS

EB74-22

Original Proposal

IEBC: 505.2, 702.4

Proponents: Jennifer Hatfield, J. Hatfield & Associates, Fenestration & Glazing Industry Alliance (formerly AAMA) (jen@jhatfieldandassociates.com); Craig Drumheller, WDMA, WDMA (cdrumheller@wdma.com)

2021 International Existing Building Code

Revise as follows:

505.2 Window fall prevention ~~opening control devices~~ on replacement windows. In Group R-2 or R-3 buildings containing dwelling units, and one- and two-family dwellings and townhouses regulated by the *International Residential Code*, window opening control devices or other window fall prevention devices complying with ASTM F2090 shall be installed where an existing window is replaced and where all of the following apply to the replacement window:

1. The window is operable.
2. One of the following applies:
   2.1. The window replacement includes replacement of the sash and frame.
   2.2. The window replacement includes the sash only where the existing frame remains.
3. One of the following applies:
   3.1. In Group R-2 or R-3 buildings containing dwelling units, the bottom of the clear opening of the window opening is at a height less than 36 inches (915 mm) above the finished floor.
   3.2. In one- and two-family dwellings and townhouses regulated by the*International Residential Code*, the bottom of the clear opening of the window opening is at a height less than 24 inches (610 mm) above the finished floor.
4. The window will permit openings that will allow passage of a 4-inch-diameter (102 mm) sphere when the window is in its largest opened position.
5. The vertical distance from the bottom of the clear opening of the window opening to the finished grade or other surface below, on the exterior of the building, is greater than 72 inches (1829 mm).

Exception: Operable windows where the bottom of the clear opening of the window opening is located more than 75 feet (22 860 mm) above the finished grade or other surface below, on the exterior of the room, space or building, and that are provided with window fall prevention devices that comply with ASTM F2006.

702.4 Window fall prevention ~~opening control devices~~ on replacement windows. In Group R-2 or R-3 buildings containing dwelling units and one- and two-family dwellings and townhouses regulated by the International Residential Code, window opening control devices o other fall prevention devices complying with ASTM F2090 shall be installed where an existing window is replaced and where all of the following apply to the replacement window:

1. The window is operable.
2. One of the following applies:
   2.1. The window replacement includes replacement of the sash and frame.
   2.2. The window replacement includes the sash only where the existing frame remains.

3. One of the following applies:
   3.1. In Group R-2 or R-3 buildings containing dwelling units, the bottom of the clear opening of the window opening is at a height less than 36 inches (915 mm) above the finished floor.

   3.2. In one- and two-family dwellings and townhouses regulated by the*International Residential Code*, the bottom of the clear opening of the window opening is at a height less than 24 inches (610 mm) above the finished floor.

4. The window will permit openings that will allow passage of a 4-inch-diameter (102 mm) sphere when the window is in its largest opened position.

5. The vertical distance from the bottom of the clear opening of the window opening to the finished grade or other surface below, on the exterior of the building, is greater than 72 inches (1829 mm).

Exception: Operable windows where the bottom of the clear opening of the window opening is located more than 75 feet (22 860 mm) above the finished grade or other surface below, on the exterior of the room, space or building, and that are provided with window fall prevention devices that comply with ASTM F2006.

Reason: These sections are about fall prevention and window opening control devices (WOCDs) are one of several options in addressing fall prevention. This proposal changes the titles of sections 505.2 and 702.4 to properly reflect that these sections are addressing fall prevention in replacement windows and not just specifically WOCDs.
Then within the body of each section the proposal clarifies that window opening control devices or other types of window fall prevention devices complying with ASTM F2090 must be installed during replacement when all the following existing code language applies.

This proposal will not change the current requirements but simply provides clarity and a more proper title to these sections. It also provides for consistency between the two sections as currently section 702.4 does not include "or other fall prevention devices" whereas section 505.2 does.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
The proposal will have no effect on the cost of construction as the changes presented are not meant to alter the current requirements but simply meant to provide better clarity that other methods of fall prevention are available. This will lead to more consistent enforcement.

Public Hearing Results

Committee Action **As Modified**

Committee Modification:

702.4 Window fall prevention on replacement windows.
In Group R-2 or R-3 buildings containing dwelling units and one- and two-family dwellings and townhouses regulated by the International Residential Code, window opening control devices or other <u>window</u> fall prevention devices complying with ASTM F2090 shall be installed where an existing window is replaced and where all of the following apply to the replacement window:

1. The window is operable.

2. One of the following applies:
   2.1. The window replacement includes replacement of the sash and frame.

   2.2. The window replacement includes the sash only where the existing frame remains.

3. One of the following applies:
   3.1. In Group R-2 or R-3 buildings containing dwelling units, the bottom of the clear opening of the window opening is at a height less than 36 inches (915 mm) above the finished floor.

   3.2. In one- and two-family dwellings and townhouses regulated by the*International Residential Code*, the bottom of the clear opening of the window opening is at a height less than 24 inches (610 mm) above the finished floor.

4. The window will permit openings that will allow passage of a 4-inch-diameter (102 mm) sphere when the window is in its largest opened position.
5. The vertical distance from the bottom of the clear opening of the window opening to the finished grade or other surface below, on the exterior of the building, is greater than 72 inches (1829 mm).

Exception: Operable windows where the bottom of the clear opening of the window opening is located more than 75 feet (22 860 mm) above the finished grade or other surface below, on the exterior of the room, space or building, and that are provided with window fall prevention devices that comply with ASTM F2006.

Committee Reason: This proposal was approved based upon the proponents reason statement. The modification places the omitted word "window" to be consistent with Section 505.2. (Vote: 14-0)

Final Hearing Results

EB74-22 AM

EB75-22

Original Proposal

IEBC: 506.5.3, [BS] 1006.3

Proponents: David Bonowitz, David Bonowitz, S.E., FEMA-ATC Seismic Code Support Committee (dbonowitz@att.net); Kelly Cobeen, Wiss Janney Elstner Associates, Federal Emergency Management Agency/Applied Technology Council - Seismic Code Support Committee (kcobeen@wje.com); Michael Mahoney, FEMA, FEMA (mike.mahoney@fema.dhs.gov)

THIS CODE CHANGE WILL BE HEARD BY THE IBC-STRUCTURAL CODE COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THAT COMMITTEE.

2021 International Existing Building Code

Revise as follows:

506.5.3 Seismic loads (seismic force-resisting system). Where a *change of occupancy* results in a building being assigned to a higher *risk category* , or where the change is from a Group S or Group U occupancy to any occupancy other than Group S or Group U, the building shall satisfy the structural requirements of Section 1613 of the International Building Code for the new *risk category* using full seismic forces. Where a change of occupancy results in a building being assigned to Risk Category IV and Seismic Design Category D or F, nonstructural components serving any portion of the building changed to Risk Category IV shall comply with the requirements of Section 1613 of the *International Building Code* or shall comply with ASCE 41 using an objective of Operational nonstructural performance with the BSE-1N earthquake hazard level.

Exceptions:

1. Where the area of the new occupancy is less than 10 percent of the building area, the occupancy is not changing from a Group S or Group U occupancy, and the new occupancy is not assigned to *Risk Category* IV, compliance with this section is not required. The cumulative effect of occupancy changes over time shall be considered.
2. Where a *change of use* results in a building being reclassified from *Risk Category* I or II to Risk Category III and the seismic coefficient, S_{DS}, is less than 0.33, compliance with this section is not required.
3. Unreinforced masonry bearing wall buildings assigned to *Risk Category* III and to Seismic Design Category A or B, shall be permitted to use Appendix Chapter A1 of this code.
4. Where the change is from a Group S or Group U occupancy and there is no change of risk category, use of reduced seismic forces shall be permitted.

[BS] 1006.3 Seismic loads. Where a *change of occupancy* results in a building being assigned to a higher *risk category*, or where the change is from a Group S or Group U occupancy to any occupancy other than Group S or Group U, the building shall satisfy the structural requirements of Section 1613 of the International Building Code for the new *risk category* using full seismic forces. Where a change of occupancy results in a building being assigned to Risk Category IV and Seismic Design Category D or F, nonstructural components serving any portion of the building changed to Risk Category IV shall comply with the requirements of Section 1613 of the *International Building Code* or shall comply with ASCE 41 using an objective of Operational nonstructural performance with the BSE-1N earthquake hazard level.

Exceptions:

1. Where a *change of use* results in a building being reclassified from *Risk Category* I or II to *Risk Category* III and the seismic coefficient, S_{DS}, is less than 0.33, compliance with this section is not required.
2. Where the area of the new occupancy is less than 10 percent of the building area, the occupancy is not changing from a Group S or Group U occupancy, and the new occupancy is not assigned to *Risk Category* IV, compliance with this section is not required. The cumulative effect of occupancy changes over time shall be considered.
3. Unreinforced masonry bearing wall buildings assigned to *Risk Category* III and to Seismic Design Category A or B shall be permitted to use Appendix Chapter A1 of this code.

4. Where the change is from a Group S or Group U occupancy and there is no change of*risk category*, use of reduced seismic forces shall be permitted.

Reason:
This proposal protects essential nonstructural systems and components in existing buildings being changed to Risk Category IV.

Fire stations, emergency operations centers, hospital emergency departments, and other facilities assigned to RC IV are especially reliant on the performance of nonstructural systems. Yet the current code, even where it triggers seismic upgrade for a change of risk category, does not require any consideration of existing nonstructural components.

This proposal provides a level of protection consistent with the tough philosophy of the IEBC for change of occupancy projects. Still, it is limited to the most crucial and cost-beneficial situations where structural retrofit is already triggered. It applies only where a change of use would create a RC IV space within an existing non-RC IV building, where the code already requires a seismic structural evaluation and possibly a retrofit. This proposal would supplement the triggered structural work by including the nonstructural systems that would make the new RC IV areas functional. In addition, consider its limited scope:

- Change of occupancy to RC III is exempt.
- RC IV buildings in areas of low seismicity are exempt. (Application to moderate and high seismicity is consistent with the IEBC's current philosophy for change of occupancy, and we believe application to all of SDC D and SDC F is appropriate to avoid a perverse incentive in the code. That said, the proposal could be made less onerous in some areas by limiting it to SDC F or to the higher seismicity parts of SDC D, say Sds > 0.5g.)
- Existing nonstructural systems that are not needed to serve the new RC IV areas are exempt.

As is normal in the IEBC, “full” seismic criteria, represented by the specified ASCE 41 objective, are applicable for change of risk category triggers. (Again, we believe this is appropriate to avoid a perverse incentive in the code. That said, the proposal could be made less onerous by relaxing the ASCE 41 objective to Position Retention with the BSE-1N hazard, which would exempt many components and remove the need for backup power and retroactive component certification if it is the design intent to use existing, possibly nonconforming, nonstructural systems to serve the new RC IV areas.)

This proposal fills a gap in the code related to the expected performance of RC IV facilities, but it is consistent with other requirements related to the performance of these buildings. For reference and as precedents, consider:

- Current IEBC requirements for operational access to RC IV facilities affected by a change of occupancy (502.6 and 1103.3)
- ICC 500 requirements for storm shelter “critical support systems,” which requires an existing building to protect mechanical and plumbing systems that support a storm shelter addition.
- IBC 1604.5.1 requirements for assigning risk category in buildings with multiple occupancies. Even if a portion of a building has no RC IV use itself, and even if it is structurally separated from any RC IV uses, it is still assigned to RC IV if it provides access, egress, or life safety systems to the RC IV portion.
- Damage to the new Olive View hospital in the Northridge earthquake. The structure did fine. Nonstructural failures shut down the hospital.
- Too many articles, white papers, and reports to name, all arguing that we need to take nonstructural systems more seriously.

The proposal makes matching edits to the Prescriptive and Work Area methods.

A notes on phrasing: The proposal applies to nonstructural systems that “serve” the new RC IV areas. This is similar to the “work area” concept, but it does not use that terminology because distributed nonstructural systems (HVAC, elevators) can be critical to the work area without actually being within it. Thus, the triggered scope might extend beyond the defined “work area” even if it does not involve the whole building.

Finally, the proposal adds the word "structural" within the current text of each revised section to clarify that the current provision applies only to structural elements (per Section 304.3). We have made a note to staff that if a separate proposal modifying the way these and other provisions reference Section 304.3 is approved, that other proposal should take precedence, and addition of the word "structural" as shown here should be ignored.

Cost Impact: The code change proposal will increase the cost of construction
And the increase will be proper, since the code should discourage the use of deficient nonstructural systems for new RC IV areas. It is consistent with the IEBC's philosophy regarding change of occupancy and change of risk category projects. That said, the proposal will

increase costs only for buildings changing to RC IV in areas of significant seismicity, which are already subject to structural retrofit.

Public Hearing Results

Committee Action **As Submitted**

THIS CODE CHANGE WAS HEARD BY THE IBC-STRUCTURAL COMMITTEE.

Committee Reason: Approved as submitted as this addresses concerns to protect essential nonstructural systems and components in existing buildings of Risk Category IV. The committee expressed that the wording could be reviewed for clarity during the public comment period. (Vote:13-1)

Final Hearing Results

EB75-22 AS

EB78-22

Original Proposal

IEBC: 601.1

Proponents: Michael Fillion, National Council of Structural Engineers Associations (mrf.structure@verizon.net)

2021 International Existing Building Code

Revise as follows:

601.1 Scope. The provisions of this chapter shall be used in conjunction with Chapters 7 through 12 and shall apply to the *alteration*, *addition* and *change of occupancy* of *existing structures*, including historic ~~and moved~~ structures, as referenced in Section 301.3.2. The work performed on an *existing building* shall be classified in accordance with this chapter.

Reason: Moved structures are no longer addressed in the work area method as noted in Section 301.4. Therefore, this term should be deleted from this section.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
This proposal is for clarification as moved buildings are no longer addressed by the work area method and keeping the term within Section 601.1 is confusing.

Public Hearing Results

Committee Action **As Submitted**

Committee Reason: This proposal was approved based upon the proponents reason statement. (Vote: 14-0)

Final Hearing Results

EB78-22 AS

EB80-22

Original Proposal

IEBC: 803.2.2, 803.2.5

Proponents: Chad Sievers, New York State, Deparment of State (chad.sievers@dos.ny.gov); Kevin Duerr-Clark, New York State Department of State, New York State Department of State (kevin.duerr-clark@dos.ny.gov)

2021 International Existing Building Code

Revise as follows:

803.2.2 Groups A, B, E, F-1, H, I-1, I-3, I-4, M, R-1, R-2, R-4, S-1 and S-2. In buildings with occupancies in Groups A, B, E, F-1, H, I-1, I-3, I-4, M, R-1, R-2, R-4, S-1 and S-2, *work areas* that have exits or corridors shared by more than one tenant or that have exits or corridors serving an occupant load greater than 30 shall be provided with automatic sprinkler protection where both of the following conditions occur:

1. The *work area* is required to be provided with automatic sprinkler protection in accordance with the *International Building Code* as applicable to new construction.
2. The *work area* exceeds 50 percent of the floor area.

Exception: If the building does not have an existing ~~sufficient municipal~~ water supply present at ~~for~~ the floor of the proposed work area with sufficient pressure and flow for the design of a fire sprinkler system ~~available to the floor~~ and without installation of a new fire pump, the *work areas* shall be protected by an automatic smoke detection system throughout all occupiable spaces other than sleeping units or individual dwelling units that activates the occupant notification system in accordance with Sections 907.4, 907.5 and 907.6 of the International Building Code.

803.2.5 Other required automatic sprinkler systems. In buildings and areas listed in Table 903.2.11.6 of the *International Building Code*, *work areas* that have exits or corridors shared by more than one tenant or that have exits or corridors serving an occupant load greater than 30 shall be provided with an automatic sprinkler system under the following conditions

1. The *work area* is required to be provided with an automatic sprinkler system in accordance with the International Building Code applicable to new construction; and
2. The building has an existing ~~sufficient municipal~~ water supply present at ~~for~~ the floor of the proposed work area with sufficient presssure and flow for the design of an automatic sprinkler system ~~available to the floor~~ and without installation of a new fire pump.

Reason: There is confusion surrounding the language of the exception to this section. Some interpret that "sufficient municipal supply available to the floor" means the water main is in the ROW with adequate pressures and flow, and available to tap into with new piping to the building and work area. As supported by the ICC IEBC Interpretation No. 12-04 (see attached), it was never intended for a new water service/supply pipe or vertical/riser pipes to be installed which originated outside the floor of the work area as a requirement for "sufficient municipal supply" to satisfy this code section. The newly proposed language makes it clear that the existing sufficient water supply is to exist and be available to the floor where the work area is located without the installation of new supply piping, fire pump, or riser piping. Commentary to this code section states "One exception to these requirements states that if the building does not have a sufficient municipal water supply for a sprinkler system at the floor where the work area is located, then sprinklers are not required; however, that same exception does require an automatic smoke detection system throughout the work area. The smoke detection coverage is required throughout all occupiable spaces other than areas already required to install smoke alarms." While useful in understanding this code section, in many cases the Commentary is not available or enforceable. This proposal brings the stated intention of in the Commentary into the actual Code language. This code change should eliminate the need for code users to reference the Code Interpretation. New York State has made a similar change to the code and request for technical assistance on this topic has been eliminated.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
This is simply a clarification of the language as already interpreted by ICC and the commentary, so no change in the construction cost is anticipated.

Public Hearing Results

Committee Action **As Submitted**

Committee Reason: This proposal clarifies the intent of the code as to what was considered as a sufficient water supply to require the installation of a sprinkler system in level 2 alterations. (Vote: 14-0)

Final Hearing Results

EB80-22 AS

EB81-22

Original Proposal

IEBC: 803.2.6, NFPA Chapter 16

Proponents: Jeffrey M. Hugo, National Fire Sprinkler Association (NFSA), NFSA (hugo@nfsa.org)

2021 International Existing Building Code

Revise as follows:

803.2.6 Supervision. Automatic ~~Fire~~ sprinkler systems required by this section shall beelectrically supervised in accordance with the International Building Code. ~~by one of the following methods~~:

~~1. *Approved* central station system in accordance with NFPA 72.~~

~~2. *Approved* proprietary system in accordance with NFPA 72.~~

~~3. *Approved* remote station system of the jurisdiction in accordance with NFPA 72.~~

~~4. Where *approved* by the *code official*, *approved* local alarm service that will cause the sounding of an alarm in accordance with NFPA 72.~~

~~**Exception:** Supervision is not required for the following:~~

~~1. Underground key or hub gate valves in roadway boxes.~~

~~2. Halogenated extinguishing systems.~~

~~3. Carbon dioxide extinguishing systems.~~

~~4. Dry- and wet-chemical extinguishing systems.~~

~~5. Automatic sprinkler systems installed in accordance with NFPA 13R where a common supply main is used to supply both domestic and automatic sprinkler systems and a separate shutoff valve for the automatic sprinkler system is not provided.~~

Delete without substitution:

NFPA

National Fire Protection Association
1 Batterymarch Park
Quincy, MA 02169-7471

~~NFPA 13R—19~~ ~~Standard for the Installation of Sprinkler Systems in Residential Occupancies up to and Including Four Stories in Height~~

Reason: This proposal eliminates the conflict of having Level 2 and Level 3 alterations that require sprinkler systems with different supervision requirements. Correlating to the IBC for supervision provides a consistent and clearer installation of both sprinkler and alarm systems. Where automatic sprinkler systems are required by the IEBC, it refers the user to the IBC for installation and design to the appropriate sprinkler standard, i.e. NFPA 13, NFPA 13R, or NFPA 13D. With this reference to the IBC, sprinkler systems are required to be supervised per IBC, Section 903.4.1. However, the sprinkler system installation per IEBC, Section 803.2.6 has different supervision requirements and references than the IBC. The current 2024 IBC, Section 903.4.1 (see F73-21, Public Comment 1) list of exceptions is more robust than the current IEBC. Furthermore, the current IEBC, Section 803.2.6 exceptions 2,3, and 4 are not automatic sprinkler systems and those exceptions should not exist in the sprinkler section.
Reference to NFPA 13R is deleted to correlate with the removal of the reference in Section 803.2.6.

F73-.21

Proposed Change as Submitted

Proponenl s: Chase BrownIng, represenling Medford Fire Department

2021 International Are Code

Revise as follows:

900.4.2 Alarms. For *8/Jfomalic sprinkler sysfems* in51alled in accordance wilh Section 003.3.1.1 or 903.3.1.2: *J!n approvadaudble dBvice, localed on the exterlor ol the bullcllng In an *apprwed* location, shall be connected to each *wromat/c sprin/i/er system.* Such sprinkler waternow alarm devlc-es shall be actillaled by water ow equillalentlo theflow of a single sprinkler of the smallesl or lce size lnslalledIn the syslem. Where a fire alarm system is installed, actumii,n ol the ;ou/arru!!ti; *:,:prink sys/am* shall actuate the bwikling fire allirm system_

2021 International Building Code

Revise as follows:

[F] 903.4.2 Alarms. Ec,r a1J/oml'llic sprin/ds. *systems* installBd in accordanc:.. with Wc.n 903.3.1.1 or 903.3.1.2. A,J!n approved audiblBdevica, 11:>cated c,n the e rli:,r c,f the b..clldir,g in an appmved loc1!1ion, shllll be connected to each *I!utDm sprink.!Br* syst,,_,,,_ Such sprinklBr wat...-111:>w alarmdevices shall be a(tivated *oy* water now equivalent 10 the flo"w of a single sprinkler of lhe smallesl orlnce size InstalledIn lhe system. Where a fir1:at ilirm system is installed, actualioo mthe *aLJtomafic sprinklBr system* shall aciuate thtlbuikling lira ail,rm sy51tlm.

Reason, It is appropriate to providB an audblB alarm for NFPA 13 and NFPA 13R sys.terns, howev..-, NFPA 13D(903-3.1.3) doe$ oot require such a dlBvice.

Cost Im ct: The code charge proposalwill decrease the cool of constn.icfon
Not Including theexteriorbell will reduce costs.

F73-21

Public Hearing Results

Committee Action: Disapproved

Committ110 Rll9Son, ThecDmmillea staled that th1:r1easi,n tor disawrwal was that an exceptionalready exists in the =,.action chargir,gtext and all the other sections are soosectlons to1tia1:chargingtext Adclllionally, It was notedthal NFPA 13D sys1ems are allowed for some s1ructures that are not single family dwellings, whloh uould be hlstorloresources, andnot having a bell thal Is going lo tell you lhat !here's a waler flow goingon Inside Is poti>ntial ty goir,g to dl,m<19e those structures beyond repair. (Vote: 8-7)

F73-2:1

Individual Consideration Agenda

Public Comment 1:

IFC: 903.4 (New), 903.4, 903.4.1, 903.4.2, 903.4.3; IBC: 903.4 (New}, [Fl 903.4, [F] 903.4.1, [F] 903.4.2, [F] 903.4.3

Proponenls: Jeffrey **Shapiro,** representing Sell [)elf.shapiro@lntloodooonsullants.com);Chase Blownlng, represenllng Medford Fire Department requests A, I.lod isd by Public Comment

Replace as follows:

2021 International Fire Code

903.4 Sprfnklel' system supervision and al.arms . *Autom?tic sprinkler systems* uoorvlslon andalarms shall.:.omply with Sf!OliotI§ 003.4.1 through 903.4.3.

803,4 Electronic supervision Sp.iRkle. s{SteRl S11pe..isian end elB.1R1e. Valves CQntrolling the water supp!Y fur *automatic sprinkl,;,r*

sys/ems, pumps, tanks, waler lsvels aoo lemperatur81', critical air pressures aoo waterllow switches onall sprinklBr systems shall be electrically supervised by ated fire alarm conlml uni!'.

Excep1 ions:

1. Au/oll1alc *sprinkler systems* protecting one- and two-family *dwBllin/}s.*
2. limited area sprinkler sys1 ems In accordaooewlth Section 903.3.8. provl(led 1001baOk!low m:evemioo (ley!ce1rs1valves 1wa100 In llmlt<>rJar.aa sprlnkl!ar 5ys1em supply pplng shall he lockft!l In lb" open R9§11ionunless wrm1y1ng an ocrn.panoy requ1.e.110 re equipped with a fire alarmsy:st&m lr which case theback/low mw•mw xalv....shallbe el&etrlcaltysvN'!•Yi:!f'dby a tamper switch l""Italle:dlr acoordaooe w11h NFPA 72 and sooaratelv annuoo1a1ed.
3. *Auromatic sprinkler syslllms* lmtalled In acoordance wllh NFPA 13A where a oommon supply main ls used to supply bolh dcmeslic water a.oo th!! *automatic ,;prink!Br sys/em,* and a sepi,r shutoff valve for the *automatic £prink!Br syst"m* is not provid@d_
4. Jockloy pump control valv81' that are s!!aled or iDo;:kiod in th!! open position.
6. Cc,ntrol v;,lve,sto commen;i;,I kilcheri hoods, paint spray booths or dp tarics th!,! are se;,led or locked in the open position.
S, Valves oonlrollIng the fuel supply to 'fire pump engines lhat are sealed or locked In the open position.
7. Trim valves to pressure switches In dry, preactlon aoo deh:Jge sprinkler syslems lha! are sealed or locked In lhe open position.
8. Undergru.md key or hub gate valves In roa:t>M1y boxes.

900,,4,+Monitoring. Alarm, s""ervisory and trQ<,Jbi.- signals shallbe distinctly different and sh;,11b@wtc,mafically transmitted to an *approved* supervising station or, where *approved* by the *lite code ollicial,* shall sound an audlole signal at a cons1anlly attended location.

E eep!:11111. B!l<il(O:, C\(ji,ljeR ee,lee tee(,aloes leoatee lji llffiltee area dl)ili,!iiej e alefi, S l)l)!r l)t!li, ol,allle l l1ed lji llle Ol'()R l(o(i:liliOi!, Ij, aee ei.... 1elil:li1ell le llo e "ippB!l ,,jU, s liFo sleFFIi5)61efli, llao llseMls,, 1310, ollle, • sl, o,: ,roall so eleeilieel 51l!'Bl, iorna li, s lelllpo, ... ela l""!!t!lll!<lie aee,:,r.!"" " h iJFPA*12* •d 3 •..Nl' """ eeiat...d

Alarms. An *appr()ll.,d* a dlile aodvi:!11al sprinkler ""IB!llow alaun device, lix:;,ted on th!! i.•te,lor of the b,,,ikling in an *approw,d* location, shall be connected to ee,:,h *001amalio sprink/9r sy61em,* Such sprinkler wa1ernow alarm devices shell be oolivated by water 'flow e<Jiivelenl to the flO\ll of a sing!!! sprinkl!!r of the sma1181lt orrric:e sizi,install!d in the system. Where a water flO\llsw ch is naquired by Section 903.4 1 to be e1ec1r1ca11vsupervised, such smlnkler wa1e111ow alarm devices shall be oowered by a re alarm cot111ol vfJil or, where prcvlded, a fire alarm Where a fire alarm syslem ■ S _ aotuellon of the *oo/oma/lo sprinkler system* shall actuale the building flre alarm system,

Exception: *AufOOWffl? srorli/i2r:* sys1ems a•OIW!lng oo<>- arn1t,yo---jamlty dw<>llings.

il2iYJl_sea:+.3 High-rise building 1ioor ntrol valves. *;\oproved* supervised Indicating oonlrol valves shall be provided al the polnl of connection0 the ris!!r on eech floor in high-risi, ruildings_

2021 International Building Code

900 4 **sor[qkler** system auperyJ11ion **and** al.arms .
Auromatio sprm!Br sysfe.i1 swervision and ala.ms snailcomply with Sections 9ll3-4.1 through 903A3.

[F] 911$:+ 903.4.1 Electron.c supervision **S..ril'llil•r 91'•""" Mtperui91.m aft.i ala-!t.** Valv!!, contrc,llng the water so,,pply for *,wtDmalic prinkw syst9111s,* pumps, tanks, waler levels ancl 1emperatures, erltl,;al air pressures and walerflow swltches on all sprlnkJer sys1ems shall be electrically supervised by ated fire alarm conlrol unll'.

Exceptions:

1. *Auromalio sprinkler sys/ems* proteollng one- and two-family *dw9/l/ngs.*
2. limited area sprinkler sys1ems inaccordaooewlth Seolion903.3.8, provided tllal backllow P!"Ys'fltiP!Jdevlc<>1rs1valv<>s loca1ft!l In lim ed arBa sprinkl!!r sysl@m suooly oping shall be lockBd in the OOBn positionunle.ss SlJlply ing an occuooocy required to bB "!.lipo@d w11h a tire alarm sys1em In which case 1he baqktlow preven1er valves shall be eiectricaltv supervised by a !flmper switch 1ns1a11ai In acoordaocr w11h NFPA 72 and swarat<>ly annur.::1w.:1.
3. Au/oll1alc *sprinkler systems* lnsi;,lled in accordance with NFPA 13A where a common supply main is used to suwly both domesfo wate, and th!! ?r;toowi,;, *,;:prink!Br sy,iem,* and a separate, shutoffvalvi. for the *automi.t,i; ,prink ,sy$1"m* ls not prc,vided_
4. Jockey pump control valves that are sealed or looked In the open poslllon.
5. Control valves 10 (<lmmerclal klt(hen hoods, t):llnl spray booths or dp lail!<,s thal are sealed or locked In lhe open position.
S, Valves oonlrollIng the fuel supply to fire pump engines !hat are sealed or locked In the open position.
7. Trim valves to pressure swlt(.hes In dry, preactlon and deluge sprinkler sys1ems lha! are sealed or locked In lhe open position.
8. Undergroond key or hub gate valves in ro;idway boxes_

[F] ~~903.4.1~~ 903.4.2 **Monitoring .** Alarm, supervisory and trouble signals shall be distinctly different and shall be automatically transmitted to an *approved* supervising station or, where *approved* by the fire code official, shall sound an audible signal at a *constantly attended location.*

~~**Exception:** Backflow prevention device test valves located in limited area sprinkler system supply piping shall be locked in the open position. In occupancies required to be equipped with a fire alarm system, the backflow preventer valves shall be electrically supervised by a tamper switch installed in accordance with NFPA 72 and separately annunciated.~~

[F] ~~903.4.2~~ 903.4.3 **Alarms .** An *approved* audible and visual sprinkler waterflow alarm device, located on the exterior of the building in an *approved* location, shall be connected to each *automatic sprinkler system.* Such sprinkler waterflow alarm devices shall be activated by water flow equivalent to the flow of a single sprinkler of the smallest orifice size installed in the system. Where a water flow switch is required by Section 903.4.1 to be electrically supervised, such sprinkler waterflow alarm devices shall be powered by a fire alarm control unit or, where provided, a fire alarm system. Where a fire alarm system is provided ~~installed~~, actuation of the *automatic sprinkler system* shall actuate the building fire alarm system.

Exception: *Automatic sprinkler systems* protecting one- and two-family dwellings.

[F] ~~903.4.3~~ 903.3.9 **High-rise building floor ~~Floor~~ control valves .** *Approved* supervised indicating control valves shall be provided at the point of connection to the riser on each floor in high-rise buildings.

Commenter's Reason: Discussion at the committee hearing and the 8:7 vote clearly demonstrated varying interpretations of how Section 903.4 should be applied and that the section needs a more comprehensive rewrite to fix the existing issues. This public comment does the following to address all points of concern:

1. Creates a scoping section. Some interpret the existing exceptions in 903.4 as applying to the subsections under Section 903.4, while others do not. The revision clarifies scoping and that the exceptions in 903.4 of the 2021 edition only apply to that section, and not the subsections that followed.
2. Moves/merges the exception currently under 903.4.1 (monitoring) into the retitled section above (electronic supervision). The exception primarily relates to the need for electronic supervision, not monitoring by a supervising station or constantly attended location. Thereby, it was misplaced. Further, the current exception #2 in 903.4 exempted ALL limited area systems from any electronic supervision, so one could have argued that the exception under "monitoring" never applied. Merging the exceptions fixes that conflict in a way that clarifies logical application of the current code provisions.
3. Incorporates the committee recommendation on F74 but with improved text vs. the floor amendment that was accepted by the committee. The intent of F74 is to add visual alarm devices where audible devices are currently required. As modified by the committee, F74 also clarified that water flow switches required to be electrically supervised have to be be powered by a fire alarm control unit or a fire alarm system. If this public comment is approved, it is intended to replace the committee action on F74 since this will be the last action on this section in the 2024 edition cycle.
4. Section 903.4.3 is being relocated to Section 903.3 (installation). The requirement is more appropriately co-located with installation provisions because it is requiring floor control valves.
5. The original F73 proposed exception for one- and two-family dwellings is being added to Section 903.4.3. There was general agreement at the hearing that one- and two-family dwellings should not require exterior water flow alarms, but some felt that the original proposal was unnecessary (per the scoping misinterpretation issue discussed in #1 above). Others did not support extending an outdoor water flow alarm exception to all 13D installations, as originally proposed, so this public comment only applies the exception to one- and two-family dwellings.

Cost Impact: The net effect of the public comment and code change proposal will decrease the cost of construction
Outside alarm will now clearly not be required for one- and two-family dwelling sprinkler systems. Remainder of the proposal is cleanup of existing text and new provisions added by F74.

Public Comment# 2879

Public Comment 2:

Proponents: Dan Nichols, representing ICC Code Correlation Committee (ccc@iccsafe.org)

Commenter's Reason: The Code Correlation Committee (CCC) is not taking a position on this code change. The CCC submitted this public comment in order to bring a correlation issue to the attention of the full voting membership for the Public Comment Hearings and the Online Governmental Consensus Vote to allow the voting membership to coordinate actions on Code Changes F73-21 and F74-21. If the final actions on F73-21 is AMPC and F74-21 is AM, the resulting text will not be correlated.
The Code Correlation Committee is a standing committee of the International Code Council whose objectives, procedures and organization are set forth in Council Policy CP#44-13. The objective of the Code Correlation Committee is to maintain technical and editorial consistency among the International Codes and to assist staff in the evaluation and processing of code change proposals and comments that are exclusively editorial.

Cost Impact: The code change proposal will decrease the cost of construction
When fire sprinkler supervision requirements change or are different from other model codes, it adds construction and maintenance cost. The proposal correlates the supervision requirement across the IEBC, IBC, and IEBC. Removal of the standard is merely correlative to the revisions to Section 803.2.6

Public Hearing Results

Committee Action **As Modified**

Committee Modification:

803.2.6 Supervision. Automatic sprinkler systems required by this section shall be provided ~~electrically~~ with supervison ~~ed~~ and alarms in accordance with Section 903.4 of the International Building Code.

Committee Reason: Approval was based upon the proponents reason statement. The modification provides a necessary pointer to the specific section of the IBC for supervision and alarms. (Vote: 14-0)

Final Hearing Results

EB81-22 AM

EB82-22

Original Proposal

IEBC: 803.4, 803.4.1, 803.4.1.1, 803.4.1.5, 803.4.2, 803.4.3 (New)

Proponents: Michael O'Brian, Brighton Area Fire Authority, Brighton Area Fire Authority (mobrian@brightonareafire.com)

2021 International Existing Building Code

Revise as follows:

803.4 Fire alarm and detection. An *approved* fire alarm system shall be installed in accordance with Sections 803.4.1 through ~~803.4.2~~ 803.4.3. Where automatic sprinkler protection is provided in accordance with Section 803.2 and is connected to the building fire alarm system, automatic heat detection shall not be required.

~~An *approved* automatic fire detection system shall be installed in accordance with the provisions of this code and NFPA 72. Devices, combinations of devices, appliances, and equipment shall be *approved*. The automatic fire detectors shall be smoke detectors, except that an *approved* alternative type of detector shall be installed in spaces such as boiler rooms, where products of combustion are present during normal operation in sufficient quantity to actuate a smoke detector.~~

803.4.1 Occupancy requirements. A fire alarm system shall be installed in accordance with Sections 803.4.1.1 through 803.4.1.6. Existing alarm-notification appliances shall be automatically activated throughout the building. Where the building is not equipped with a fire alarm system, alarm-notification appliances within the *work area* shall be provided and automatically activated.

Exceptions:

1. Occupancies with an existing, previously *approved* fire alarm system.
2. Where selective notification is permitted, alarm-notification appliances shall be automatically activated in the areas selected.

Revise as follows:

803.4.1.1 Group E. A fire alarm system shall be installed in *work areas* of Group E occupancies as required by Chapter 11 of the *International Fire Code* for ~~existing~~ Group E occupancies.

803.4.1.5 Group R-1. A fire alarm system shall be installed in Group R-1 occupancies as required by Chapter 11 of the *International Fire Code* for ~~existing~~ Group R-1 occupancies.

803.4.2 Supplemental fire alarm system requirements. Where the *work area* on any floor exceeds 50 percent of that floor area, Section 803.4.1 shall apply throughout the floor.

Exception: Alarm-initiating and notification appliances shall not be required to be installed in tenant spaces outside of the *work area*.

Add new text as follows:

803.4.3 Installation. Where a fire alarm system is required to be installed in accordance with Sections 803.4.1 or 803.4.2 the *fire alarm system* shall be installed in accordance with the provisions of this code, Section 907 of the *International Building Code* and NFPA 72

Reason: This proposed change is based on clarifying the requirements for a Fire Alarm and detection system in a level 2 alteration as well as clarifying that a Group E and Group R-1 are per Chapter 11 of the IFC.

The first paragraph is modified as the language does not appear to be consistent with the installation requirements found in the IFC/IBC. The language was re-worded and a new section 803.4.3 Installation is proposed to be added.

This section is intended to clarify that it installed per the provisions of 907 and NFPA 72. Section 907 contains specific installation requirements for systems that are beyond when systems are required. It is not the intention of this new language to require compliance with

907.2 “where required for new systems” in a level 2 alteration.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
This change is intended to clarify that the requirements for fire alarm installations are not required to be installed as would be required for new construction since these requirements are found in the alteration section and focus on existing buildings. This is simply a clarification of the intent of application and will not increase the cost of construction.

Public Hearing Results

Committee Action **As Submitted**

Committee Reason: This proposal properly revises the fire alarm provisions to reference the intended requirements for existing building in the IFC. (Vote: 11-3)

Final Hearing Results

EB82-22 AS

EB83-22

Original Proposal

IEBC: 804.4, 804.4.1, 804.4.1.1, TABLE 804.4.1.1(1), TABLE 804.4.1.1(2)

Proponents: Mike Nugent, Chair, Building Code Action Committee (bcac@iccsafe.org)

2021 International Existing Building Code

804.4 Number of exits. The number of exits shall be in accordance with Sections 804.4.1 through 804.4.3.

Revise as follows:

804.4.1 Minimum number. Every story or occupied roof utilized for human occupancy on which there is a*work area* that includes exits or corridors shared by more than one tenant within the *work area* shall be provided with the minimum number of exits based on the occupancy and the occupant load in accordance with the *International Building Code*. In addition, the exits shall comply with Sections 804.4.1.1 and 804.4.1.2.

804.4.1.1 Single-exit buildings. A single exit or access to a single exit shall be permitted from spaces, any story or any~~occupied~~ occupiable roof where one of the following conditions exists:

1. The occupant load, number of dwelling units and exit access travel distance do not exceed the values in Table 804.4.1.1(1) or Table 804.4.1.1(2).
2. In Group R-1 or R-2, buildings without an*approved* automatic sprinkler system, individual single-story or multiple-story dwelling or sleeping units shall be permitted to have a single exit or access to a single exit from the dwelling or sleeping unit provided one of the following criteria are met:
   2.1. The occupant load is not greater than 10 and the exit access travel distance within the unit does not exceed 75 feet (22 860 mm).
   2.2. The building is not more than three stories in height; all third-story space is part of dwelling with an exit access doorway on the second story; and the portion of the exit access travel distance from the door to any habitable room within any such unit to the unit entrance doors does not exceed 50 feet (15 240 mm).
3. In buildings of Group R-2 occupancy of any number of stories with not more than four dwelling units per floor served by an interior exit stairway; with a smokeproof enclosure in accordance with Sections 909.20 and 1023.12 of the International Building Code or an exterior stairway as an exit; and where the portion of the exit access travel distance from the dwelling unit entrance door to the exit is not greater than 20 feet (6096 mm).

TABLE 804.4.1.1(1) STORIES AND OCCUPIABLE ROOFS WITH ONE EXIT OR ACCESS TO ONE EXIT FOR R-2 OCCUPANCIES

STORY OR OCCUPIABLE ROOF	OCCUPANCY	MAXIMUM NUMBER OF DWELLING UNITS	MAXIMUM EXIT ACCESS TRAVEL DISTANCE (feet)
Basement, first, or second or third story above grade plane and occupiable roofs over the first or second floor above grade plane	R-2[a, b, c]	4 dwelling units	50 125 feet
Third Fourth story above grade plane and higher	NP	NA	NA

For SI: 1 foot = 304.8 mm.

NP = Not Permitted.

NA = Not Applicable.

a. Buildings classified as Group R-2, equipped without an approved automatic sprinkler systemin accordance with Section 903.3.1.1 or 903.3.1.2 of the International Fire Code and provided with emergency escape and rescue openings in accordance with Section 1031 of the International Building Code.

b. This table is used for Group R-2 occupancies consisting of dwelling units. For Group R-2 occupancies consisting of sleeping units, use Table 1006.3.4(2) of the International Building Code.

c. This table is for occupiable roofs accessed through and serving individual dwelling units in Group R-2 occupancies. For Group R-2 occupancies with occupiable roofs that are not access through and serving individual units, use Table 804.4.1.1(2).

TABLE 804.4.1.1(2) STORIES AND OCCUPIABLE ROOFS WITH ONE EXIT OR ACCESS TO ONE EXIT FOR OTHER OCCUPANCIES

STORY OR OCCUPIABLE ROOF	OCCUPANCY	MAXIMUM OCCUPANT LOAD PER STORY	MAXIMUM EXIT ACCESS TRAVEL DISTANCE (feet)
First story above or below grade plane or occupable roofs over the first story above grade plane	B[b], F-2[b], S-2[a]	35 49	75
	S-2 [a,b]	35	75
Second story above grade plane	B, F-2, S-2[a]	35	75
Third story above grade plane and higher	NP	NA	NA

For SI: 1 foot = 304.8 mm.

NP = Not Permitted.

NA = Not Applicable.

a. The length of exit access travel distance in a Group S-2 open parking garage shall be not more than 100 feet.

b. Group B, F and S occupancies in buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or on the roof of such buildings shall have a maximum exit access travel distance of 100 feet.

Reason: This proposal has two reasons.

1. Coordination with IBC Section 1006.3.4 and E21-21 that added occupiable roofs to the single exit tables.

2. The current requirements in Table 804.4.1.1(1) is less that what is permitted for new construction for travel distance and could be read to not allow for a single exit from a 3rd floor. The current requirements for B and F-2 are less than permitted for new construction.

This has been approved for the 2024 IBC through the Approval of E21-21. Proposal E21-21 was approved as submitted and can be found at the following link. https://www.iccsafe.org/wp-content/uploads/IBC-Egress-2021-Group-A.pdf The committee reason statement is below:

Committee Reason:

This proposal was approved as an occupied roof is not a story, so the number of exits from the occupied roof needs to be clarified. The location of the occupied roof allowance in Table 1006.3.4(2) is appropriate as the occupied roof over the 1st floor is the same vertical travel as from the basement level. This is a good correlation with the occupied roof requirements in the code. (Vote: 10-4)

This proposal is submitted by the ICC Building Code Action Committee (BCAC).

BCAC was established by the ICC Board of Directors in July 2011 to pursue opportunities to improve and enhance assigned International Codes or portions thereof. In 2020 and 2021 the BCAC has held several virtual meetings open to any interested party. In addition, there were numerous virtual Working Group meetings for the current code development cycle, which included members of the committee as well as interested parties. Related documents and reports are posted on the BCAC website at https://www.iccsafe.org/products-and-services/i-codes/code-development/cs/building-code-action-committee-bcac/.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
This is a correlation revisions made to the IBC in Group A (2021). Without this correlation the IEBC requirements would be more restrictive than new thus increasing the cost of construction in existing buildings.

Public Hearing Results

Committee Action **As Modified**

Committee Modification:

804.4.1 Minimum number. Every story or occupiable ~~occupied~~ roof utilized for human occupancy on which there is a*work area* that includes exits or corridors shared by more than one tenant within the *work area* shall be provided with the minimum number of exits based on the occupancy and the occupant load in accordance with the *International Building Code*. In addition, the exits shall comply with Sections 804.4.1.1 and 804.4.1.2.

Committee Reason: This proposal was approved for consistency with the approval of code change proposal E21-21. The modification simply updates to the approved terminology "occupiable" versus "occupied." (Vote: 11-3)

Final Hearing Results

EB83-22 AM

EB84-22

Original Proposal

IEBC: SECTION 202 (New), 804.4.1.1, 902.1

Proponents: Mike Nugent, Chair, Building Code Action Committee (bcac@iccsafe.org)

2021 International Existing Building Code

Add new definition as follows:

OCCUPIABLE ROOF. An exterior space on a roof that is designed for human occupancy, other than maintenance or repair, and which is equipped with a means of egress system meeting the requirements of this code.

Revise as follows:

804.4.1.1 Single-exit buildings. A single exit or access to a single exit shall be permitted from spaces, any story or any~~occupied~~ occupiable roof where one of the following conditions exists:

1. The occupant load, number of dwelling units and exit access travel distance do not exceed the values in Table 804.4.1.1(1) or Table 804.4.1.1(2).
2. In Group R-1 or R-2, buildings without an *approved* automatic sprinkler system, individual single-story or multiple-story dwelling or sleeping units shall be permitted to have a single exit or access to a single exit from the dwelling or sleeping unit provided one of the following criteria are met:
   2.1. The occupant load is not greater than 10 and the exit access travel distance within the unit does not exceed 75 feet (22 860 mm).
   2.2. The building is not more than three stories in height; all third-story space is part of dwelling with an exit access doorway on the second story; and the portion of the exit access travel distance from the door to any habitable room within any such unit to the unit entrance doors does not exceed 50 feet (15 240 mm).
3. In buildings of Group R-2 occupancy of any number of stories with not more than four dwelling units per floor served by an interior exit stairway; with a smokeproof enclosure in accordance with Sections 909.20 and 1023.12 of the International Building Code or an exterior stairway as an exit; and where the portion of the exit access travel distance from the dwelling unit entrance door to the exit is not greater than 20 feet (6096 mm).

902.1 High-rise buildings. Any building having occupied floors or occupiable roof more than 75 feet (22 860 mm) above the lowest level of fire department vehicle access shall comply with the requirements of Sections 902.1.1 and 902.1.2.

Reason: This revision is for coordination with G12-21 and G20-21.
Over the last several cycles, code provisions have been added to address issues related to occupied/occupiable, vegetative and landscaped roofs. In some cases, the terms have been used interchangeably, in others applying to specific types of roof systems. With the increasing number of provisions, a definition is needed. A proposal last cycle (G7-19) attempted to add a definition for occupiable roof but was disapproved for several reasons including the fact it did not correlate with the fact the code uses “occupied roof” in some sections and “occupiable roof” in others.This code proposal both adds a definition for “occupiable roof”and. changes terminology throughout the code to be consistent with use of “occupiable roof” rather than “occupied roof”. The definition is intended to parallel the existing code definition for occupiable space:

[BG] OCCUPIABLE SPACE. A room or enclosed space designed for human occupancy in which individuals congregate for amusement, educational or similar purposes or in which occupants are engaged at labor, and which is equipped with means of egress and light and ventilation facilities meeting the requirements of this code.

The proposed definition is different in a few key ways: The laundry list of uses is left out, and the one clarification made that access for

maintenance of rooftop mechanical equipment or other maintenance does not trigger assembly live load requirements or other provisions related to occupiable roofs. The references to light and ventilation are left out as occupiable roofs are exterior spaces. No mechanical ventilation is necessary, and the code does not require lighting for exterior spaces other than portions of the means of egress.

The change to 804.4.1.1 is using the defined term.

The change to 902.1 coordinates with the change to the definition for 'high-rise building' approved in G12-21.

This proposal is submitted by the ICC Fire Code Action Committee (FCAC) and the ICC Building Code Action Committee (BCAC).

BCAC was established by the ICC Board of Directors in July 2011 to pursue opportunities to improve and enhance assigned International Codes or portions thereof. In 2020 and 2021 the BCAC has held several virtual meetings open to any interested party. In addition, there were numerous virtual Working Group meetings for the current code development cycle, which included members of the committee as well as interested parties. Related documents and reports are posted on the BCAC website at BCAC.

The FCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance assigned International Codes with regard to fire and life safety in new and existing buildings and facilities as well as the protection of life and property in wildland urban interface areas. In 2020 and 2021 the Fire-CAC held multiple virtual meetings that were open to any interested party. In addition, there were numerous virtual specific working group meetings that were also open to any interested parties, to develop, discuss and debate the proposed changes. Related documentation and reports are posted on the FCAC website at: FCAC.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
The code change is for consistency with the action taken on G12-21 and G20-21. Without consistency with the IBC proposals the IEBC would be more difficult and unclear to apply and enforce making compliance more complicated and expensive.

Public Hearing Results

Committee Action **As Submitted**

Committee Reason: This proposal was approved based upon the proponents reason statement. The revisions correlate the IEBC wih the the IBC as revised by G15-21 and G20-21 (Vote: 14-0)

Final Hearing Results

EB84-22 AS

EB85-22

Original Proposal

IEBC: 804.4, 804.4.1

Proponents: Daniel Nichols, MTA Construction and Development, MTA Construction and Development (dnichols@mnr.org)

2021 International Existing Building Code

Revise as follows:

804.4 Number of exits. The number of exits or access to exits shall be in accordance with Sections 804.4.1 through 804.4.3.

804.4.1 Minimum number. Every story utilized for human occupancy on which there is a *work area* that includes exits, access to exits, or corridors shared by more than one tenant within the *work area* shall be provided with the minimum number of exits or access to exits based on the occupancy and the occupant load in accordance with the *International Building Code*. In addition, the exits shall comply with Sections 804.4.1.1 and 804.4.1.2.

Reason: When utilizing the Alterations – Level 2 work area method, IEBC Section 804.4.1 requires that any work to a wok area that effects any exits or corridors shared by more than one tenant shall be provided with the minimum number of exits. With the recent changes to the IBC expanding the use of exit access stairways, it creates a double-edged sword for existing buildings:

1. For “newer” existing buildings constructed under the more recent editions of the IBC, any Alt. 2 rehab work on a multi-tenant story that effects a corridor with no longer be permitted to utilize the “exit access stairway” allowance that was allowed when first built since the language specifically states “minimum number of exits” without exception

2. In a more general sense, a code user that goes to the IBC looking for the minimum number of exits per story will start at IBC Section 1006.3.3 and Table 1006.3.3. Both the section and the table state “Exits, or access to exits per story.” This gives the IEBC code user little direction if they are limited to just exits, IBC compliant exits, or can use any access to exits? The latter can be very concerning since there is not any limitation to sizing, separation, or travel distances referenced anywhere for this type of application.

The purpose of IEBC 804.4.1.3 is to provide qualifiers to allow for a subset of IBC compliant exit access stairways to be permitted. The 2 sections referenced ensure that the exit access travel distance and the number of stories traveled are both considered in the determination of exit access stairways counting toward the number of “exits” within IEBC Section 804.4

Cost Impact: The code change proposal will not increase or decrease the cost of construction
This proposal is to align the methodology of "number of exits" with current requirements within the IBC.

Public Hearing Results

Committee Action **As Submitted**

Committee Reason: This proposal was approved to be consistent with the allowance of exit access stairways in the International Building Code. It was suggested that as corridors are currently mentioned in Section 804.4.1 and are considered exit access that the current language may need further refinement. (Vote: 14-0)

Final Hearing Results

EB85-22 AS

EB86-22

Original Proposal

IEBC: 804.5.2

Proponents: Kevin Scott, KH Scott & Associates LLC, KH Scott & Associates LLC (khscottassoc@gmail.com)

2021 International Existing Building Code

Revise as follows:

804.5.2 Door swing. In the *work area* and in the egress path from any*work area* to the exit discharge, all egress doors serving an occupant load ~~greater than~~ of 50 or more shall swing in the direction of exit travel.

Reason: This proposal is to make this section consistent with IBC Section 1010.1.2.1 for door swing which includes 50 occupants versus 51. See IBC section below.

1010.1.2.1 Direction of swing.

Side-hinged swinging doors, pivoted doors and balanced doors shall swing in the direction of egress travel where serving a room or area containing an occupant load of 50 or more persons or a Group H occupancy.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
This proposal is simply to make the provisions for door swing consistent with the IBC and should not have an affect on the cost of construction or enforcement.

Public Hearing Results

Committee Action **As Submitted**

Committee Reason: The revisions appropriately correlate the IEBC door swing requirements with the IBC. (Vote: 13-1)

Final Hearing Results

EB86-22 AS

EB87-22

Original Proposal

IEBC: 804.11 (New), 804.12 (New), 804.10, 804.10.1, 804.10.2, 804.12, 804.12.1, 804.12.2, 804.11

Proponents: Mike Nugent, Chair, Building Code Action Committee (bcac@iccsafe.org)

2021 International Existing Building Code

Add new text as follows:

804.11 Stairways. An existing stairway shall not be required to comply with the requirements of Section 1011 of the *International Building Code* where the existing space and construction does not allow a reduction in pitch or slope.

804.12 Escalators. Where provided in below-grade transportation stations, existing and new escalators shall be permitted to have a clear width of less than 32 inches (815 mm).

Revise as follows:

~~**804.10**~~ **804.13 Handrails.** The requirements of Sections ~~804.10.1~~ 804.13.1 and ~~804.10.2~~ 804.13.2 shall apply to handrails from the *work area* floor to, and including, the level of exit discharge.

~~**804.10.1**~~ **804.13.1 Minimum requirement.** Every required exit stairway that is part of the means of egress for any *work area* and that has three or more risers and is not provided with not fewer than one handrail, or in which the existing handrails are judged to be in danger of collapsing, shall be provided with handrails for the full length of the stairway on not fewer than one side. Exit stairways with a required egress width of more than 66 inches (1676 mm) shall have handrails on both sides.

804.10.2 804.13.2 Design. Handrails required in accordance with Section ~~804.10.1~~ 804.13.1 shall be designed and installed in accordance with the provisions of the *International Building Code*.

Exception: Handrails otherwise required to comply with Section 1011.11 of the *International Building Code* shall not be required to comply with the requirements of Section 1014.6 of the *International Building Code* regarding full extension of the handrails where such extensions would be hazardous because of plan configuration.

~~**804.12**~~ **804.14 Guards.** The requirements of Sections ~~804.12.1~~ 804.14.1 and ~~804.12.2~~ 804.14.2 shall apply to guards from the *work area* floor to, and including, the level of exit discharge but shall be confined to the egress path of any *work area*.

~~**804.12.1**~~ **804.14.1 Minimum requirement.** Every open portion of a stairway, landing, or balcony that is more than 30 inches (762 mm) above the floor or grade below and is not provided with guards, or those portions in which existing guards are judged to be in danger of collapsing, shall be provided with guards.

~~**804.12.2**~~ **804.14.2 Design.** Guards required in accordance with Section ~~804.12.1~~ 804.14.1 shall be designed and installed in accordance with the *International Building Code*.

~~**804.11**~~ **804.4 Refuge areas.** Where *alterations* affect the configuration of an area utilized as a refuge area, the capacity of the refuge area shall not be reduced below the required capacity of the refuge area for horizontal exits in accordance with Section 1026.4 of the *International Building Code*. Where the horizontal exit also forms a smoke compartment, the capacity of the refuge area for Group I-1, I-2 and I-3 occupancies and Group B ambulatory care *facilities* shall not be reduced below that required in Sections 407.5.3, 408.6.2, 420.6.1 and 422.3.2 of the *International Building Code*, as applicable.

Reason: The intent of this proposal is to put in the same allowances in the prescriptive method and work area method for 1) existing stairways being replaced, 2) handrail extensions and 3) escalators to below-grade transportation systems. The prescriptive method

contains these allowances in Section 503.1 for alterations.

503.1 General. Alterations to any building or structure shall comply with the requirements of the International Building Code for new construction. Alterations shall be such that the existing building or structure is not less complying with the provisions of the International Building Code than the existing building or structure was prior to the alteration.

Exceptions:

1. An existing stairway shall not be required to comply with the requirements of Section 1011 of the International Building Code where the existing space and construction does not allow a reduction in pitch or slope.
2. Handrails otherwise required to comply with Section 1011.11 of the International Building Code shall not be required to comply with the requirements of Section 1014.6 of the International Building Code regarding full extension of the handrails where such extensions would be hazardous because of plan configuration.3. Where provided in below-grade transportation stations, existing and new escalators shall be permitted to have a clear width of less than 32 inches (815 mm).

While the purpose of this change is for correlation between IEBC options, the BCAC was informed that there were an issue in the current section on escalators regarding coordination with the ADA (503.1). There is a proposal submitted by Marsha Mazz addressing this issue. If this proposal is successful, the text here should be coordinated.The reordering in Section 804 allows for the requirements for stairways, escalators, handrails and guards to be located together and refuge areas to be moved behind Group I-2. The end result would be as follows.

SECTION 804

MEANS OF EGRESS

804.1 Scope.

804.2 General.

804.3 Group I-2.

804.4 ~~804.11~~ Refuge areas.

804.5 ~~804.4~~ Number of exits.

804.6 ~~804.5~~ Egress doorways.

804.7 ~~804.6~~ Openings in corridor walls.

804.8 ~~804.7~~ Dead-end corridors.

804.9 ~~804.8~~ Means-of-egress lighting.

804.10 ~~804.9~~ Exit signs.

804.11 Stairways.

804.12 Escalators.

804.13 ~~804.10~~ Handrails.

804.14 ~~804.12~~ Guards.

This proposal is submitted by the ICC Building Code Action Committee (BCAC).BCAC was established by the ICC Board of Directors in July 2011 to pursue opportunities to improve and enhance assigned International Codes or portions thereof. In 2020 and 2021 the BCAC has held several virtual meetings open to any interested party. In addition, there were numerous virtual Working Group meetings for the current code development cycle, which included members of the committee as well as interested parties. Related documents and reports are posted on the BCAC website at https://www.iccsafe.org/products-and-services/i-codes/code-development/cs/building-code-action-committee-bcac/.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
This proposal merely correlates the stairway and handrail allowances and requirements for the prescriptive method with the work area method. Otherwise without this allowance when applying the work area method stairways and handrails would be required to strictly comply with the IBC whereas the prescriptive method may not require such compliance. Therefore the intent is provide the same allowanced which may either reduce or not change the cost of compliance for the work area method.

Public Hearing Results

Committee Action **As Submitted**

Committee Reason: This proposal was approved based upon the proponents reason statement. This proposal appropriately provides more correlation across design methods. (Vote: 13-1)

Final Hearing Results

EB87-22 AS

EB88-22

Original Proposal

IEBC: 904.1.8 (New)

Proponents: Michael O'Brian, Brighton Area Fire Authority, Brighton Area Fire Authority (mobrian@brightonareafire.com)

2021 International Existing Building Code

Add new text as follows:

904.1.8 Supervision and Alarms. Where an automatic sprinkler system is required by Sections 904.1.1 through 904.1.7 such systems shall be provided with supervision and alarms in accordance with Section 903.4 of the *International Building Code*.

Reason: This change is intended to clarify that buildings undergoing a level 3 alterations, their automatic sprinkler systems are required to be supervised in accordance with IBC 903. From time to time, AHJ's will find where sprinkler systems were not supervised electronically and this section would clarify on those level 3 alterations, the system would be electronically supervised.
In Group A this section in the IBC/IFC underwent a major revision and clarification for supervision of valves and alarm devices on automatic sprinkler systems.

Cost Impact: The code change proposal will increase the cost of construction
This change, although intended to clarify the existing requirement, could add costs to construction if the existing automatic sprinkler system is not supervised electronically. IBC 903 does include uniform provisions for where valves and sprinklers system do not need to be electronically supervised.

Public Hearing Results

Committee Action **As Submitted**

Committee Reason: Approval was based on consistency with the action taken on EB81-22 and correlation with the IBC and IFC for supervision. (Vote: 14-0)

Final Hearing Results

EB88-22 AS

EB91-22

Original Proposal

IEBC: SECTION 908 (New), 908.1 (New), 908.1.1 (New), 908.1.2 (New)

Proponents: Mike Nugent, Chair, Building Code Action Committee (bcac@iccsafe.org); Robert Marshall, FCAC, FCAC (fcac@iccsafe.org)

2021 International Existing Building Code

Add new text as follows:

SECTION 908
EMERGENCY RESPONDER COMMUNICATIONS ENHANCEMENT SYSTEM COVERAGE

908.1 Emergency Responder Communication Enhancement System Coverage. The existing building shall undergo an evaluation of the emergency responder communication signal strength and coverage area within the entire building in accordance with 908.1.1 and 908.1.2.

Exception: Where it is determined by the fire code official that the emergency responder communication enhancement system (ERCES) is not needed.

908.1.1 Evaluation. The evaluation shall determine the current signal strength and coverage capabilities of the public safety communication systems utilized by the jurisdiction, measured at the exterior of the building.

908.1.2 Compliance. The evaluation report shall be submitted for approval by the fire code official and the frequency license holder. Where the coverage area, signal strength or DAQ does not comply with Section 510 of the International Fire Code, the existing building shall be provided with emergency responder communication enhancement system coverage. The fire code official is authorized to establish the timeframe for such installation or modification.

Reason: Any building undergoing a Level 3 Alteration is likely to have a change in the ERCES coverage areas, signal strength and DAQ within that existing building. This proposal does not require an ERCES installation, The proposal simply adds a requirement for this building to undergo an evaluation of the public communication system coverage to ensure the altered building still complies with the IFC Section 510.

The exception in this proposal aligns with the current language in the IFC (510.1 Exception 2).

This proposal is submitted by the ICC Building Code Action Committee (BCAC) and ICC Fire Code Action Committee (FCAC).

BCAC was established by the ICC Board of Directors in July 2011 to pursue opportunities to improve and enhance assigned International Codes or portions thereof. In 2020 and 2021 the BCAC has held several virtual meetings open to any interested party. In addition, there were numerous virtual Working Group meetings for the current code development cycle, which included members of the committee as well as interested parties. Related documents and reports are posted on the BCAC website at https://www.iccsafe.org/products-and-services/i-codes/code-development/cs/building-code-action-committee-bcac/.

The FCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance assigned International Codes with regard to fire and life safety in new and existing buildings and facilities as well as the protection of life and property in wildland urban interface areas. In 2020 and 2021 the Fire-CAC held multiple virtual meetings that were open to any interested party. In addition, there were numerous virtual specific working group meetings that were also open to any interested parties, to develop, discuss and debate the proposed changes. Related documentation and reports are posted on the FCAC website at: https://www.iccsafe.org/products-and-services/i-codes/code-development/cs/fire-code-action-committee-fcac/

Cost Impact: The code change proposal will increase the cost of construction

The code change proposal will increase the cost of construction as there is a cost associated with the ERCES evaluation being required. Fees are typically $1K for the evaluation. The ERCES contractor would typically credit the evaluation fee against the purchase or upgrade of an ERCES system. There would be a cost associated with enhancing or installing a new ERCES system within a building that will vary based upon the characteristics of the building including size, location, type of construction and other factors.

Public Hearing Results

Committee Action **As Submitted**

Committee Reason: Level 3 alterations were seen as a reasonable level of work to reevaluate the effectiveness of these systems. It was suggested that this same trigger should be added to the prescriptive and performance method. (Vote: 14-0)

Final Hearing Results

EB91-22 AS

EB92-22

Original Proposal

IEBC: 1001.2.1, 1001.2.2, 1001.2.2.1

Proponents: China Clarke, New York State Department of State, NYS DOS Division of Building Standards and Codes (china.clarke@dos.ny.gov); Kevin Duerr-Clark, New York State Department of State, New York State Department of State (kevin.duerr-clark@dos.ny.gov)

2021 International Existing Building Code

Revise as follows:

1001.2.1 Change of use. Any work undertaken in connection with a ~~change in use~~ *change of use* ~~that does not involve a *change of occupancy* classification or a change to another group within an occupancy classification~~ shall conform to the applicable requirements for the work as classified in Chapter 6 and to the requirements of Sections 1002 through 1010.

Exception: As modified in Section 1204 for *historic buildings*.

1001.2.2 Change of occupancy classification ~~or group~~. Where a building undergoes a change of occupancy classification ~~the occupancy classification of a building changes~~, the provisions of Sections 1002 through 1011 shall apply. ~~This includes a change of occupancy classification and a change to another group within an occupancy classification.~~

1001.2.2.1 Partial change of occupancy. Where a portion of an *existing building* undergoes a change of occupancy classification ~~the occupancy classification or group of a portion of an *existing building* is changed~~, Section 1011 shall apply.

Reason: In the last code cycle, all references to “group” were removed from the IEBC definition of "change of occupancy", the definition was revised, and a definition for “change of use” was added (Code Change No: ADM 3-19 Part I). In light of those changes, the references to "group" in Sections 1001.2.1, 1001.2.2, and 1001.2.2.1 of the 2021 IEBC no longer make sense. We propose cleaning up the language by removing references to “change of group” and by modifying the language to include the defined terms “Change of Occupancy” and “Change of Use.”

Cost Impact: The code change proposal will not increase or decrease the cost of construction
This proposal is simply aligning with the definitions for “change of occupancy” and “change of use” and is not intended to increase the cost of construction.

Public Hearing Results

Committee Action **As Submitted**

Committee Reason: This proposal was approved as it appropriately uses the defined term "change of occupancy" and removes language no longer consistent with the term. (Vote: 13-0)

Final Hearing Results

EB92-22 AS

EB93-22

Original Proposal

IEBC: 1001.2, 1004.1, 1011.1, 1011.2, 1011.2.1, 1011.2.2

Proponents: Kevin Scott, KH Scott & Associates LLC, KH Scott & Associates LLC (khscottassoc@gmail.com)

2021 International Existing Building Code

Revise as follows:

1001.2 Certificate of occupancy. A *change of occupancy* or a *change of occupancy* within a space where there is a different fire protection system threshold requirement in Chapter 9 of the current *International Building Code* than exists in the current building or space shall not be made to any structure without the approval of the*code official*. A certificate of occupancy shall be issued where it has been determined that the requirements for the *change of occupancy* have been met.

1004.1 General. Fire protection requirements ~~of~~in Section 1011 shall apply where either of the following occur:

1. ~~a~~ A building, or portion~~s~~ thereof, ~~undergo~~ undergoes a *change of occupancy*. ~~classification or where~~
2. ~~there is a~~A building, or portion thereof, undergoes a *change of occupancy* ~~within a space where~~ and there is a different fire protection system threshold requirement in Chapter 9 of thecurrent *International Building Code*than exists in the current building or portion thereof.

1011.1 General. The provisions of this section shall apply to buildings or portions thereof undergoing a *change of occupancy* classification. This includes a *change of occupancy* classification within a group as well as a *change of occupancy* classification from one group to a different group. The provisions of this section shall also apply ~~or~~ where there is a *change of occupancy* within a ~~space where~~building or portion thereof and there is a different fire protection system threshold requirement in Chapter 9 of thecurrent *International Building Code* than exists in the current building or space. Such buildings shall also comply with Sections 1002 through 1010 of this code.

1011.2 Fire protection systems. Fire protection systems shall be provided in accordance with Sections 1011.2.1 and 1011.2.2.

1011.2.1 Fire sprinkler system. Where a *change in occupancy* classification occurs or where there is a *change of occupancy* within a space where there is a different fire protection system threshold requirement in Chapter 9 of thecurrent *International Building Code*than exists in the current building or space that requires an automatic fire sprinkler system to be provided based on the new occupancy in accordance with Chapter 9 of the *International Building Code*. The installation of the automatic sprinkler system shall be required within the area of the *change of occupancy* and areas of the building not separated horizontally and vertically from the change of occupancy by one of the following:

1. Nonrated permanent partition and horizontal assemblies.
2. Fire partition.
3. Smoke partition.
4. Smoke barrier.
5. Fire barrier.
6. Fire wall.

Exceptions:

1. An automatic sprinkler system shall not be required in a one- or two-family dwelling constructed in accordance with the *International Residential Code*.

2. Automatic sprinkler system shall not be required in a townhouse constructed in accordance with the *International Residential Code*.
3. The townhouse shall be separated from adjoining units in accordance with Section R302.2 of the *International Residential Code*.

1011.2.2 Fire alarm and detection system. Where a change in occupancy classification occurs or where there is a *change of occupancy* within a space where there is a different fire protection system threshold requirement in Chapter 9 of the current *International Building Code* than exists in the current building or space that requires a fire alarm and detection system to be provided based on the new occupancy in accordance with Chapter 9 of the *International Building Code*, such system shall be provided throughout the area where the *change of occupancy* occurs. Existing alarm notification appliances shall be automatically activated throughout the building. Where the building is not equipped with a fire alarm system, alarm notification appliances shall be provided throughout the area where the *change of occupancy* occurs in accordance with Section 907 of the *International Building Code* as required for new construction.

Reason: The definition of change of occupancy was revised last cycle to specify that a change in the use or occupancy of a building, or portion thereof, shall be treated as a Change of Occupancy if the current IBC requires a greater degree of protection than exists in the building. This proposal intends to correlate other sections of the IEBC with the new definition and to clarify how this concept is to be applied. The intent of the IEBC is to compare the current fire safety requirements in the building with the fire safety requirements applicable to the proposed occupancy in the current IBC. However, this comparison has been erroneously made to compare the thresholds for each occupancy in the IBC. Consider a Group R-1 being converted to a Group R-2. The existing building is not sprinklered. The intent of the IEBC, and the clarification offered by this code change, is that the features of the existing building are compared to the requirements in the current IBC for the proposed occupancy. Unfortunately, it has occurred that the sprinkler thresholds for each occupancy in the current IBC are compared, and since the thresholds are the same, it has been determined that sprinklers are not required. This is not the intent of the IEBC or the code change that approved last cycle.

This proposal intends to clarify that the fire safety features of the existing building are to be compared to the current requirements in the IBC. The building needs to comply with the requirements in the current IBC for fire safety features.

This would specifically mean that if a nonsprinklered Group R-1 is changed to Group R-2, sprinklers would now be required in accordance with the IBC. In other words, even though those two occupancies have the same sprinkler threshold in the IBC, that is not what is compared. The existing building is compared to the current threshold for sprinklers in the IBC.

The same process would be followed for a Group M being changed to Group S-1. Even though the sprinkler threshold for both occupancies requires sprinklers where a fire area exceeds 12,000 square feet is not relevant. The question is - does the building comply with the sprinkler requirements in the current code for the proposed occupancy?

An extreme example is an existing Group I-3 being changed to a Group H-2. The fire sprinkler threshold for both occupancies is “sprinklers installed in all”. If the existing Group I-3 did not have sprinklers, would you require sprinklers for a change of occupancy to Group H-2? Of course! The existing building does not comply with the requirements in the current IBC.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
This proposal is merely clarifying that the intent is that the current conditions of the existing building experiencing any change in occupancy be compared with the fire protection triggers in Chapter 9 of the current IBC. This may require the installation of a new system such as an automatic sprinkler system but that was the intent of the current language when it was placed in the code. Therefore it was not intended to change of the cost of construction.

Public Hearing Results

Committee Action **As Submitted**

Committee Reason: This proposal was approved based upon the proponents reason statement. (Vote: 8-6)

Final Hearing Results

EB93-22 AS

EB95-22

Original Proposal

IEBC: 1002.3

Proponents: John Williams, Committee on Healthcare (ahc@iccsafe.org)

2021 International Existing Building Code

Revise as follows:

1002.3 Change of occupancy in health care. Where a *change of occupancy* occurs to a Group I-2 or I-1*facility*, the *work area* with the *change of occupancy* shall comply with the International Building Code.

~~Exception~~ Exceptions:

1. A change in use or occupancy in the following cases shall not be required to meet the International Building Code:
   1.1. Group I-2, Condition 2 to Group I-2, Condition 1.
   1.2. Group I-2 to ambulatory health care.
   1.3. Group I-2 to Group I-1.
   1.4. Group I-1, Condition 2 to Group I-1, Condition 1.
2. In a Group I-1 occupancy, where a change of use is not in conjunction with a Level 3 alteration, a smoke barrier in accordance with Section 420.6 of the IBC is not required to be added.

Reason: The intent of this proposal is to clarify what is required where an existing Group I-1 has partial change of use within the facility. It is not reasonable for a small change of use to trigger a major renovation to create smoke compartments. This is consistent with the Healthcare committee proposal for alterations in these facilities.
Prior to changes to the 2015 I-Codes, many Assisted Living communities were already operating as I-1 Occupancies, without having a Condition 1 or Condition 2 declaration. A clear requirement is needed for when these buildings would need to declare a Condition and meet the current code requirements for Smoke Barriers and Sprinklers. This code change sets the threshold at a Level 3 Alteration (greater than 50% of the aggregate building area), because that level of work equates to a larger expenditure level, and it matches the requirements already in Section 904 requiring upgraded fire protection for Group I-1 occupancies.

Many Assisted Living and Memory care communities operate on very slim budgets. These communities should be able to operate as they currently are, and make certain cosmetic renovations to their building without triggering the current code requirements of a Condition 1 or Condition 2, Group I-1 Occupancy. However, once they reach the Level 3 alteration threshold (renovation of 50% of building) they must declare a condition, and if they choose Condition 2, they must add smoke barriers in the work area. The requirement to add sprinklers in the work area is already contained in Section 904.1.4 of the IEBC.

This proposal is submitted by the Committee on Healthcare (CHC). The CHC was established by the ICC Board to evaluate and assess contemporary code issues relating to healthcare facilities. This is a joint effort between ICC and the American Society for Healthcare Engineering (ASHE), a subsidiary of the American Hospital Association, to eliminate duplication and conflicts in healthcare regulation. In 2020 and 2021 of the committees as well as any interested parties, to discuss and debate the proposed changes. Information on the CHC, including: meeting agendas; minutes; reports; resource documents; presentations; and all other materials developed in conjunction with the CHC effort can be downloaded from the CHC website at https://www.iccsafe.org/products-and-services/i-codes/code-development/cs/icc-committee-on-healthcare/.

Cost Impact: The code change proposal will increase the cost of construction
This proposal clarifies where compliance with the special use requirements for Group I-1 occupancies in accordance with the IBC apply. Such upgrades are required where there is a level 3 alteration in conjunction with a change in use. This then does allow minor changes (up through alteration level 2) to occur without full compliance. Where the exception cannot be met it may require installation of a smoke

barrier thus increasing the cost of construction.

Public Hearing Results

Committee Action **As Submitted**

Committee Reason: This proposal was approved based upon the proponents reason statement. The new exception provides a reasonable exception to full compliance with the International Building Code for a minor change of use in a Group I-1 Occupancy. (Vote: 13-1)

Final Hearing Results

EB95-22 AS

EB96-22

Original Proposal

IEBC: 1011.2.1

Proponents: Jeffrey S. Grove, P.E. FSFPE, Jensen Hughes, Jensen Hughes (jgrove@jensenhughes.com)

2021 International Existing Building Code

Revise as follows:

1011.2.1 Fire sprinkler system. ~~Where a change in occupancy classification occurs or where there is a *change of occupancy* within a space where there is a different fire protection system threshold requirement in Chapter 9 of the International Building Code that requires an automatic fire sprinkler system to be provided based on the new occupancy in accordance with Chapter 9 of the International Building Code.~~The installation of an automatic sprinkler system shall be required where there is a *change of occupancy classification* and Chapter 9 of the *International Building Code* requires an automatic fire sprinkler system based on the new occupancy or where there is a change of occupancy within the space where there is a different fire protection system threshold requirement in Chapter 9 of the *International Building Code*

.The installation of the automatic sprinkler system shall be required within the area of the *change of occupancy* and areas of the building not separated horizontally and vertically from the change of occupancy by a nonrated permanent partition and horizontal assemblies, fire partition, smoke partition, smoke barrier, fire barrier, or fire wall. ~~one of the following:~~

~~1. Nonrated permanent partition and horizontal assemblies~~.

~~2. Fire partition.~~

~~3. Smoke partition.~~

~~4. Smoke barrier.~~

~~5. Fire barrier.~~

~~6. Fire wall.~~

Exceptions:

1. An automatic sprinkler system shall not be required in a one- or two-family dwelling constructed in accordance with the International Residential Code.
2. Automatic sprinkler system shall not be required in a townhouse constructed in accordance with the International Residential Code.
3. The townhouse shall be separated from adjoining units in accordance with Section R302.2 of the *International Residential Code*.

Reason: This section was revised from the 2018 IEBC. In the 2021 IEBC, the section begins with a subordinate clause fragment. A revision is necessary to provide proper sentence structure and a complete thought. This is intended to clarify the intent and is not intended to be a substantive change.

Alternatively a simpler solution to addressing this issue could be as follows:

Revise as follows:

1011.2.1 Fire sprinkler system. Where a change in occupancy classification occurs or where there is a change of occupancy within a space where there is a different fire protection system threshold requirement in Chapter 9 of the International Building Code that requires an automatic fire sprinkler system to be provided based on the new occupancy in accordance with Chapter 9 of the International Building Code, ~~. The~~ the installation of the automatic sprinkler system shall be required within the area of the change of occupancy and areas of the building not separated horizontally and vertically from the change of occupancy by one of the following:

1. Nonrated permanent partition and horizontal assemblies.
2. Fire partition.
3. Smoke partition.
4. Smoke barrier.
5. Fire barrier.
6. Fire wall.

Exceptions:

1. An automatic sprinkler system shall not be required in a one- or two-family dwelling constructed in accordance with the International Residential Code.
2. Automatic sprinkler system shall not be required in a townhouse constructed in accordance with the International Residential Code.
3. The townhouse shall be separated from adjoining units in accordance with Section R302.2 of the International Residential Code.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
There is no cost impact as it is an editorial change to fix the sentence structure to provide the proper regulatory language intended.

Public Hearing Results

Committee Action **As Submitted**

Committee Reason: This proposal was approved based upon the proponents reason statement. The revision is primarily editorial but will clarify the enforcement of automatic sprinkler requirements. (Vote: 14-0)

Final Hearing Results

EB96-22 AS

EB97-22

Original Proposal

IEBC: 1011.2.1, 1011.2.1.1 (New), 1011.2.1.1.1 (New)

Proponents: Mike Nugent, Chair, Building Code Action Committee (bcac@iccsafe.org); Robert Marshall, FCAC, FCAC (fcac@iccsafe.org)

2021 International Existing Building Code

1011.2.1 Fire sprinkler system. Where a change in occupancy classification occurs or where there is a*change of occupancy* within a space where there is a different fire protection system threshold requirement in Chapter 9 of the International Building Code that requires an automatic fire sprinkler system to be provided based on the new occupancy in accordance with Chapter 9 of the International Building Code. The installation of the automatic sprinkler system shall be required within the area of the *change of occupancy* and areas of the building not separated horizontally and vertically from the change of occupancy by one of the following:

1. Nonrated permanent partition and horizontal assemblies.
2. Fire partition.
3. Smoke partition.
4. Smoke barrier.
5. Fire barrier.
6. Fire wall.

Exceptions:

1. An automatic sprinkler system shall not be required in a one- or two-family dwelling constructed in accordance with the International Residential Code.
2. Automatic sprinkler system shall not be required in a townhouse constructed in accordance with the International Residential Code.
3. The townhouse shall be separated from adjoining units in accordance with Section R302.2 of the *International Residential Code*.

Add new text as follows:

1011.2.1.1 Nonrequired automatic sprinkler systems.. The code official is authorized to permit the removal of existing automatic sprinkler system where all of the following conditions exist:

1. The system is not required for new construction.
2. Portions of the system that are obvious to the public are removed.
3. The system was not installed as part of any special construction features, including fire-resistance-rated assemblies and smoke-resistive assemblies, conditions of occupancy, means of egress conditions, fire code deficiencies, approved modifications or approved alternative materials, design and methods of construction, and equipment applying to the building.

1011.2.1.1.1 Approval. Plans, investigation and evaluation reports, and other data shall be submitted documenting compliance Section 1011.2.1.1 for review and approval in support of a determination authorizing the removal of the automatic sprinkler system by the code official.

Reason: E103-19 was approved as modified. It was disapproved in the final action due because Section 1011.2.1.1.1 did not reference all three items in Section 1011.2.1.1. The concerns raised have been addressed in the revisions.

A change of occupancy could be to an occupancy that did not require a sprinkler system. If the system was old, outdated or needed extensive reconfiguration, costs could be high. The new Section 1011.2.1.1 allows for non required systems to be removed. To be removed the designer/building owner would have to demonstrate to the code official that the building did not need the sprinklers for occupancy, fire areas or type of construction limitations, and that none of the trade off's for items such as travel distance or corridor rating were in effect in the building. The system would have to be removed totally – including the system in the ceiling, standpipes and the connections for the fire department outside of the building.
This proposal is submitted by the ICC Building Code Action Committee (BCAC) and ICC Fire Code Action Committee (FCAC).

BCAC was established by the ICC Board of Directors in July 2011 to pursue opportunities to improve and enhance assigned International Codes or portions thereof. In 2020 and 2021 the BCAC has held several virtual meetings open to any interested party. In addition, there were numerous virtual Working Group meetings for the current code development cycle, which included members of the committee as well as interested parties. Related documents and reports are posted on the BCAC website at https://www.iccsafe.org/products-and-services/i-codes/code-development/cs/building-code-action-committee-bcac/.

The FCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance assigned International Codes with regard to fire and life safety in new and existing buildings and facilities as well as the protection of life and property in wildland urban interface areas. In 2020 and 2021 the Fire-CAC held multiple virtual meetings that were open to any interested party. In addition, there were numerous virtual specific working group meetings that were also open to any interested parties, to develop, discuss and debate the proposed changes. Related documentation and reports are posted on the FCAC website at: https://www.iccsafe.org/products-and-services/i-codes/code-development/cs/fire-code-action-committee-fcac/

Cost Impact: The code change proposal will not increase or decrease the cost of construction
This section is essentially providing the allowance to remove a system that is not required and may be providing a false sense of security. Any costs will simply be associated with the removal process. Once removed it will reduce maintenance and repair costs.

Public Hearing Results

Committee Action **As Submitted**

Committee Reason: This proposal was approved as it is necessary for situations where existing systems needs to be removed and recognizes that existing buildings should not be held to a higher standard than new buildings. This also includes language to ensure that such systems are not removed where they are part of the approval of the building as originally constructed. The proposal also appropriately includes language to make sure all visible aspects of the system are removed to avoid a false sense of protection by the public. There was some concern of the use of the term "obvious" with regard to the visibility to the public and also on the location of the provisions within a section triggering automatic sprinklers. It was suggested that other types of non required fire safety systems should also be addressed. (Vote: 14-0)

Public Comments

Public Comment 1

Proponents: Kota Wharton, City of Grove City, City of Grove City (kwharton@grovecityohio.gov) requests As Modified by Public Comment

Modify as follows:

2021 International Existing Building Code

1011.2.1.1 Nonrequired automatic sprinkler systems.. The code official is authorized to permit the removal of existing automatic sprinkler system where all of the following conditions exist:

1. The system is not required for new construction.
2. Portions of the system that are ~~obvious~~ exposed to the public are removed.
3. The system was not installed as part of any special construction features, including fire-resistance-rated assemblies and smoke-resistive assemblies, conditions of occupancy, means of egress conditions, fire code deficiencies, approved modifications or approved alternative materials, design and methods of construction, and equipment applying to the building.

Commenter's Reason: Clarifies the intent of the word "obvious".
Expose. *v. To show publicly; to display*[...] (Staff et al., *Black's Law Dictionary* 1990)

Bibliography: Publisher's Editorial Staff, Haley, J. R., & Nolan-Haley, J. M. (1990).*Black's Law Dictionary* (6th ed.). West Publishing Co.

Cost Impact: The net effect of the Public Comment and code change proposal will not increase or decrease the cost of construction
See proposal cost impact statement.

Final Hearing Results

EB97-22 AMPC1

EB98-22

Original Proposal

IEBC: 1011.5.1, 1011.5.2, 804.12, 804.12.1, 804.12.2

Proponents: John Williams, Committee on Healthcare (ahc@iccsafe.org)

2021 International Existing Building Code

Revise as follows:

1011.5.1 Means of egress for change to a higher-hazard category. Where a change of occupancy classification is made to a higher-hazard category (lower number) as shown in Table 1011.5, the means of egress shall comply with the requirements of Chapter 10 of the International Building Code.

Exceptions:

1. Stairways shall be enclosed in compliance with the applicable provisions of Section 903.1.
2. Existing stairways including handrails and guards complying with the requirements of Chapter 9 shall be permitted for continued use subject to approval of the *code official*.
3. Any stairway replacing an existing stairway within a space where the pitch or slope cannot be reduced because of existing construction shall not be required to comply with the maximum riser height and minimum tread depth requirements.
4. Existing corridor walls constructed on both sides of wood lath and plaster in good condition or $^1/_2$-inch-thick (12.7 mm) gypsum wallboard shall be permitted. Such walls shall either terminate at the underside of a ceiling of equivalent construction or extend to the underside of the floor or roof next above.
5. Existing corridor doorways, transoms and other corridor openings shall comply with the requirements in Sections 804.6.1, 804.6.2 and 804.6.3.
6. Existing dead-end corridors shall comply with the requirements in Section 804.7.
7. An operable window complying with Section 1011.5.6 shall be accepted as an*emergency escape and rescue opening*.
8. In Group I-1 and I-2 facilities, required guards enclosing the occupiable roof areas shall be permitted to be greater than 48 inches (1219 mm) above the surface of the occupiable roof where the occupants, because of clinical needs, require restraint or containment as part of a function of a psychiatric or cognitive treatment area.

1011.5.2 Means of egress for change of use to an equal or lower-hazard category. Where a change of occupancy classification is made to an equal or lesser-hazard category (higher number) as shown in Table 1011.5, existing elements of the means of egress shall comply with the requirements of Section 905 for the new occupancy classification. Newly constructed or configured means of egress shall comply with the requirements of Chapter 10 of the International Building Code.

~~**Exception**~~ **Exceptions:**

1. Any stairway replacing an existing stairway within a space where the pitch or slope cannot be reduced because of existing construction shall not be required to comply with the maximum riser height and minimum tread depth requirements.
2. In Group I-1 and I-2 facilities, required guards enclosing the occupiable roof areas shall be permitted to be greater than 48 inches (1219 mm) above the surface of the occupiable roof where the occupants, because of clinical needs, require restraint or containment as part of a function of a psychiatric or cognitive treatment area.

~~**804.12**~~ **Guards.** The requirements of Sections 804.12.1 and 804.12.2 shall apply to guards from the *work area* floor to, and including, the level of exit discharge but shall be confined to the egress path of any *work area*.

804.12.1 Minimum requirement. Every open portion of a stairway, landing, or balcony that is more than 30 inches (762 mm) above the

floor or grade below and is not provided with guards, or those portions in which existing guards are judged to be in danger of collapsing, shall be provided with guards.

Revise as follows:

804.12.2 Design. Guards required in accordance with Section 804.12.1 shall be designed and installed in accordance with the*International Building Code*.

Exception: In Group I-1 and I-2 facilities, required guards enclosing the occupiable roof areas shall be permitted to be greater than 48 inches (1219 mm) above the surface of the occupiable roof where the occupants, because of clinical needs, require restraint or containment as part of a function of a psychiatric or cognitive treatment area.

Reason: The intent of this proposal is to allow higher guards for patient safety around outdoor patient garden/exercise areas on the roof. The Healthcare committee understands the guard height limitation for low rise buildings was to allow for fire department access to the roof. However, we feel that the limitations proposed are reasonable.

Access to fresh air and getting outside is incredibly important for older adults who live in Group I-1&I-2 care facilities. These care recipients spend up to 90% of their time indoors and if the only choice of outdoor space requires staff or volunteers to take them downstairs, via an elevator, to get outside, some care recipients never get the opportunity to be outside. If a garden space or other outdoor area can be created on a roof adjacent to sleeping areas, this can make getting outside much easier.

Unfortunately, while we want care recipients to get outside, we also need to keep them safe. We know that exit seeking behavior is prevalent and a 48” barrier is not enough to protect from elopement or self harm.

Outdoor areas are important for patient mental health and wellness. Hospitals and nursing homes in a urban environment often don't have property that would allow for outdoor patient areas. The 'clinical needs' language is an attempt to balance care recipient wellness with safety. These types of facilities have extensive fire and safety evacuation plans and staff that is trained in assisting care recipients and guest for evacuation/defend-in-place during an emergency. Fire departments perform regular inspections of these buildings, to they would be very familiar with the layouts. In addition, these facilities have exceptionally good records for a small number of fire events.

There was a similar change in Group A, G105-21 that had an original intention of allowing for guards to exceed the height limitation required by IBC Section 503.1.4.1. The modification to broaden this allowance for “walls, parapets, rooftop structures (some of which are exempted in Exception 1), and wind screens” on roofs above the reach of fire departments (>75’) was appropriate. However, there is still the issue with existing buildings that want to expand or add an occupied roof with the result being –

- If any structure or guard is above 48” high, this is now being considered an additional story so they could violate height limitations for the type of construction.
- If the building is less than 75’ in height, you cannot have guards high enough to discourage people from jumping off the roof.

There is a suggestion for Sections 804.12.2, 1011.5.1 and 1011.5.2 for Group I-1 and I-2 where high guards are needed for patient safety. The language for the limitation of 'clinical needs' is the same as IBC Section 101.2.14 for Controlled Egress Doors.

Below are two pictures of a roof garden on a memory care facility. There are glass between the columns.

This proposal is submitted by the Committee on Healthcare (CHC). The CHC was established by the ICC Board to evaluate and assess contemporary code issues relating to healthcare facilities. This is a joint effort between ICC and the American Society for Healthcare Engineering (ASHE), a subsidiary of the American Hospital Association, to eliminate duplication and conflicts in healthcare regulation. In 2020 and 2021 of the committees as well as any interested parties, to discuss and debate the proposed changes. Information on the CHC, including: meeting agendas; minutes; reports; resource documents; presentations; and all other materials developed in conjunction with the CHC effort can be downloaded from the CHC website at https://www.iccsafe.org/products-and-services/i-codes/code-development/cs/icc-committee-on-healthcare/.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
This is an optional allowance for certain facilities so will provide design flexibility. It will cost more if such barriers are constructed but that is an option for the building owner.

Public Hearing Results

Committee Action **As Submitted**

Committee Reason: This proposal was approved as it is consistent with the allowance in the IBC for such guards through the occupiable roof requirements and is critical to allow the ability for such occupancies to provide a safe outdoor space for occupants. There was some concern as to how this allowance relates to the occupiable roof requirements in the IBC as approved in Group A where they are addressed within Chapter 5 versus Chapter 10 of the IBC. (Vote: 10-4)

Final Hearing Results

EB98-22 AS

EB99-22

Original Proposal

IEBC: 1011.6.1

Proponents: Jeffrey S. Grove, P.E. FSFPE, Jensen Hughes, Jensen Hughes (jgrove@jensenhughes.com)

2021 International Existing Building Code

Revise as follows:

1011.6.1 Height and area for change to a higher-hazard category. Where a change of occupancy classification is made to a higher-hazard category as shown in Table 1011.6, heights and areas of buildings and structures shall comply with the requirements of Chapter 5 of the *International Building Code* for the new occupancy classification.

~~Exception~~ Exceptions:

1. For high-rise buildings constructed in compliance with a previously issued permit, the type of construction reduction specified in Section 403.2.1 of the *International Building Code* is permitted. This shall include the reduction for columns. The high-rise building is required to be equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 of the *International Building Code*.
2. Buildings that were constructed in compliance with a previously issued permit that have floor assemblies with a 1-1/2 hour fire resistance rating shall not be required to comply with Chapter 5 of the *International Building Code* where all of the following apply:
   2.1. Chapter 5 of the *International Building Code* requires Type IB construction.
   2.2. The building does not include Group H occupancies.
   2.3. The building is protected throughout with an automatic sprinkler system in accordance Section 903.3.1.1 of the *International Building Code*.

Reason: In general, the IEBC is written such that the extent to which an existing building is required to comply with the requirements of the IBC is proportional to the extent to which the existing building is being changed. The IEBC requires compliance with IBC chapter 5 (which may require upgrading the fire resistance ratings of existing building elements) when there is a change of occupancy classification to a higher hazard. See IEBC section 1011.6.1.

The legacy BOCA code had a construction classification (type 2A) that consisted of 2 hour rated columns, 1-1/2 hour rated floors and a one hour rated roof. This construction type was permitted for buildings up to 8 stories in height.

Many existing office buildings are converted to residential use as part of adaptive reuse projects. Per IEBC section 1011.6.1, a change in occupancy classification to a higher hazard category (like B to R-1 or R-2) would require upgrading these existing floor assemblies from a 90 minute rating to a 2 hour fire resistance rating. Upgrading 90 minute rated floor assemblies to a 2 hour fire resistance rating would be disproportionate to the risk associated with change from business to residential use in a building 8 stories in height or less. In general, the occupant load of residential occupancies is less than the occupant load of business occupancies.

Although IBC section 403.2.1 permits reduction from type IB to type IIA construction in some high rise buildings, not all legacy BOCA type 2A buildings are high rises.

This new exception is proposed to be limited to fully sprinklered buildings and to buildings that do not include type H occupancies. Additionally, we do not propose applying this exception to buildings that are required by IBC chapter 5 to have type IA construction.

Cost Impact: The code change proposal will decrease the cost of construction

This code change would reduce the cost of construction such that this specific type of existing construction would not require fire resistance upgrades.

Public Hearing Results

Committee Action **As Submitted**

Committee Reason: This was felt to be a reasonable allowance that avoids having to upgrade the floor ratings from 90 minutes to 2 hours when changing occupancies from Group B to Group R-2. (Vote: 13-1)

Final Hearing Results

EB99-22 AS

EB100-22

Original Proposal

IEBC: 1011.7.1

Proponents: China Clarke, New York State Department of State, NYS DOS Division of Building Standards and Codes; Kevin Duerr-Clark, New York State Department of State, New York State Department of State (kevin.duerr-clark@dos.ny.gov)

2021 International Existing Building Code

Revise as follows:

1011.7.1 Exterior wall rating for change of occupancy classification to a higher-hazard category. Where a change of occupancy classification is made to a higher hazard category as shown in Table 1011.7, exterior walls shall have fire resistance, ~~and~~ exterior opening areas, and opening protectives as required by the *International Building Code*.

Exception: A 2-hour fire-resistance rating shall be allowed where the building does not exceed three stories in height and is classified as one of the following groups: A-2 and A-3 with an occupant load of less than 300, B, F, M or S.

Reason: The exterior walls of buildings, or portions thereof, undergoing a change of occupancy classification to a higher-hazard category, are required to comply with the provisions of Section 1011.7.1. The provisions require that users comply with the "fire resistance" and the "exterior opening protectives" of the IBC. In instances where existing exterior walls have existing openings that are, either not allowed or their area exceeds the maximum area allowed by section 705.8 of the IBC, the existing language may be interpreted as allowing those openings to remain unchanged. We propose to clarify the intent of the section by adding language that directs the user to be aware of the maximum allowable area of those openings also.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
This proposal is intended to make sure exterior openings including opening protectives comply with the IBC. Without this revision it is unclear whether this is the intent of the section. It was not intended to make a technical change.

Public Hearing Results

Committee Action **As Submitted**

Committee Reason: This proposal was approved as it provides clarification of intent that the opening areas must also be be addressed for existing building undergoing a change of occupancy classification. (Vote: 13-0)

Final Hearing Results

EB100-22 AS

EB101-22

Original Proposal

IEBC: 1011.8.2

Proponents: Jeffrey M. Hugo, National Fire Sprinkler Association (NFSA), NFSA (hugo@nfsa.org)

2021 International Existing Building Code

Revise as follows:

1011.8.2 Stairways. Where a change of occupancy classification is made to a higher-hazard category as shown in Table 1011.5, interior stairways shall be enclosed as required by the *International Building Code*.

Exceptions:

1. In other than Group I occupancies, an enclosure shall not be required for openings serving only one adjacent floor and that are not connected with corridors or stairways serving other floors.
2. Unenclosed existing stairways need not be enclosed in a continuous vertical shaft if each story is separated from other stories by 1-hour fire-resistance-rated construction or *approved* wired glass set in steel frames and all exit corridors are sprinklered in accordance with the *International Building Code*. The openings between the corridor and the ~~occupant~~ tenant space shall have not fewer than one sprinkler ~~head~~ above the openings on the tenant side. ~~The sprinkler system shall be permitted to be supplied from the domestic water-supply systems, provided that the system is of adequate pressure, capacity and sizing for the combined domestic and sprinkler requirements.~~
3. Existing penetrations of stairway enclosures shall be accepted if they are protected in accordance with the*International Building Code*.

Reason: The requirement for installation of automatic sprinkler systems in the IEBC goes back to the IBC, which therein references the installation standards, such as NFPA 13, NFPA 13R, etc. This change provides the same and constant IEBC path back to the IBC for new sprinkler installations. The allowance for the connection to domestic water systems, adequate pressure, and sizing of limited area systems is handled better through the IBC, Where this exception is used, a limited area sprinkler system per IBC, Section 903.3.8, has prescriptive rules for classification, water connections, supervision, and calculations.

Cost Impact: The code change proposal will decrease the cost of construction
This change decreases the cost of construction by referencing a known installation standard.

Public Hearing Results

Committee Action **As Submitted**

Committee Reason: This proposal was approved based upon the consistency it provides with the IBC for the protection of unenclosed exit stairways. (Vote: 13-1)

Final Hearing Results

EB101-22 AS

EB104-22

Original Proposal

IEBC: [BS] 1201.2

Proponents: Gwenyth R. Searer, Wiss, Janney, Elstner Associates, Inc., myself (gsearer@wje.com)

THIS CODE CHANGE WILL BE HEARD BY THE IBC-STRUCTURAL CODE COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THAT COMMITTEE.

2021 International Existing Building Code

Revise as follows:

[BS] 1201.2 Report. A *historic building* or structure undergoing *alteration* or *change of occupancy* shall be investigated and evaluated, and . ~~If it is intended that the building meet the requirements of this chapter,~~a written report shall be prepared and filed with the*code official* by a *registered design professional* where ~~such a report is necessary in the opinion of~~required by the *code official*. ~~Such~~ The report ~~shall be in accordance with Chapter 1 and~~ shall identify all unsafe conditions as defined in Section 115~~each required safety feature that is in compliance with this chapter and where compliance with other chapters of these provisions would be damaging to the contributing historic features~~. For buildings assigned to Seismic Design Category D, E or F, adescription of ~~structural evaluation describing, at a minimum~~, the vertical and horizontal elements of the lateral force-resisting system and ~~any~~ strengths or weaknesses therein shall be included ~~prepared~~. Additionally, the report shall describe the components of the building or structure that provide a level of safety substantially below that required of existing non-historic buildings and structures. ~~each feature that is not in compliance with these provisions and shall demonstrate how the intent of these provisions is complied with in providing an equivalent level of safety.~~

Reason: The provisions in Section 1201.2 that govern the investigation, evaluation, and report are unclear at best. The Commentary is similarly vague and provides no substantive guidance regarding the intent of this provision.
The section contains a general reference to Chapter 1 (i.e., "in accordance with Chapter 1), but the only provisions in Chapter 1 that refer to such a report are in Section 115, which deals with unsafe conditions. Section 115 does not deal with "required safety features that are in compliance with this chapter" (whether the phrase "this chapter" refers to Chapter 1 or Chapter 12 is also unclear) and does not deal with "compliance with other chapters of these provisions".

It makes little sense to refer the user generally to Chapter 1 regarding a report if the only mention of a such a report in Chapter 1 is in Section 115, so a more direct pointer is proposed.

Further, the term "required safety feature" is undefined and unclear, and a vague requirement to assess compliance with all of the chapters makes little sense, when only alterations and changes of occupancy are covered by Section 1201.2.

The requirement to "describe each feature that is not in compliance with these provisions and demonstrate how the intent of these provisions is complied with in providing an equivalent level of safety" is also unclear and largely unenforceable.

This proposal simplifies and improves the language in Section 1201.2 by providing a direct pointer to Section 115 and eliminating vague and unenforceable language. If this proposal is accepted, the section will read as follows:

A *historic building* or structure undergoing *alteration* or *change of occupancy* shall be investigated and evaluated, and a written report shall be prepared and filed with the *code official* by a *registered design professional* where required by the *code official*. The report shall identify all unsafe conditions as defined in Section 115. For buildings assigned to Seismic Design Category D, E or F, a description of the vertical and horizontal elements of the lateral force-resisting system and strengths or weaknesses therein shall be included. Additionally, the report shall describe the components of the building or structure that provide a level of safety substantially below that required of existing non-historic buildings and structures.

While I would prefer to be able to say that this revised language matches the intent of the existing provision, I honestly cannot say that because the existing provision is extremely vague and unclear. What I can say is that this revised language is both reasonable and fair; it addresses unsafe conditions; and if an assessment of the level of safety provided by existing components must be provided, it requires

comparison to that required of existing buildings (as opposed to that required of new buildings).

Cost Impact: The code change proposal will not increase or decrease the cost of construction
It is impossible to tell for sure whether this proposal will result in an increase or a decrease in the cost of construction because the existing language is so vague. Streamlining the provision and making it enforceable will arguably reduce the amount of time spent trying to intuit the meaning of the section, so that should reduce costs. Making the provision clear and enforceable may result in increased enforcement, so that could arguably increase the cost of construction.

In any event, the total change in the cost of construction is likely negligible as this provision only applies to alterations and changes of occupancy in historic buildings, and, even then, only where required by the building official. It's a very small subset of projects in a small subset of buildings.

Public Hearing Results

Committee Action **As Modified**

THIS CODE CHANGE WAS HEARD BY THE IBC-STRUCTURAL COMMITTEE.

Committee Modification:
[BS]1201.2 Report. A *historic building* ~~or structure~~ undergoing *alteration* or *change of occupancy* shall be investigated and evaluated, and . a written report shall be prepared and filed with the *code official* by a *registered design professional* where required by the *code official*. The report shall identify all unsafe conditions as defined in Section 115 . For buildings assigned to Seismic Design Category D, E or F, a description of the vertical and horizontal elements of the lateral force-resisting system and strengths or weaknesses therein shall be included . Additionally, the report shall describe the components of the building ~~or structure~~ that provide a level of safety substantially below that required of existing non-historic buildings ~~and structures~~.

Committee Reason: Approved as modified as the revised wording adds needed clarity and direction. The modification removes redundant wording as "structure" is already included in the definition of historic buildings. (Vote: 12-2)

Final Hearing Results

EB104-22 AM

EB105-22

Original Proposal

IEBC: [BS] 1201.2

Proponents: Gwenyth R. Searer, Wiss, Janney, Elstner Associates, Inc., myself (gsearer@wje.com)

THIS CODE CHANGE WILL BE HEARD BY THE IBC-STRUCTURAL CODE COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THAT COMMITTEE.

2021 International Existing Building Code

Revise as follows:

[BS] 1201.2 Report. A *historic building* undergoing *alteration* or *change of occupancy* shall be investigated and evaluated. If it is intended that the building meet the requirements of this chapter, a written report shall be prepared and filed with the *code official* by a *registered design professional* where such a report is necessary in the opinion of the*code official*. Such report shall be in accordance with Chapter 1 and shall identify each required safety feature that is in compliance with this chapter and where compliance with other chapters of these provisions would be damaging to the contributing historic features. For buildings assigned to Seismic Design Category D, E or F, a structural evaluation describing, at a minimum, the vertical and horizontal elements of the lateral force-resisting system and any strengths or weaknesses therein shall be prepared. Additionally, the report shall describe each feature that is not in compliance with these provisions and shall demonstrate how the intent of these provisions is complied with in providing an equivalent level of safety.

Exception: An investigation, evaluation, and report shall not be required where the*alteration* is scoped by Section 602 as a Level 1 *alteration* and does not make the building or structure less complying with the provisions of the*International Building Code*.

Reason: The requirements for a report for historic structures are not particularly clear. What is a "required safety feature" and where are these defined? What are "other chapters of these provisions" and why would it be necessary to comply with all of them when only a Level 1 alteration is being proposed?
Further, and more importantly, there is no need for a report for a historic building or structure for a minor alteration that will not make the building or structure less complying with the building code than it was prior to the alteration. These are historic buildings, and typically they do not meet the requirements of the code for new construction. Itemization of all the ways that a building does not meet the current code for new construction and figuring out all the ways to upgrade the building or structure and then determining whether such upgrades would damage the contributing historic features can be a fairly onerous task.

According to the IEBC, Level 1 alterations include such minor things as replacement of roofing or like-for-like replacement of a piece of broken equipment. For historic buildings and structures that have necessarily existed for many decades or even several centuries, any Level 1 alteration that does not make the building less compliant with current code is not changing the status quo and should not trigger a costly report with all of these requirements.

This proposal makes it clear that Level 1 alterations that do not make the building or structure less compliant do not trigger the need for a report. Alterations more extensive than Level 1, alterations that would make the building less compliant with respect to code, and changes of occupancy would still be covered by this section. But Level 1 alterations that do not make any noncompliances with the current code for new construction worse should be exempted from this requirement.

Note that Building Officials still retain the authority to order remedy of dangerous conditions per Section 1205.2, order inspections per Section 109.2, order abatement of unsafe conditions per Section 115, and order emergency measures per Section 116. This proposal will not alter those powers.

Cost Impact: The code change proposal will decrease the cost of construction
This proposal relaxes the requirements for a report for historic buildings and structures that are undergoing Level 1 alterations that do not make the building less compliant with the building code for new construction. As a report to determine all the ways that an existing historic building or structure does not meet the current building code for new construction can be a fairly onerous task, exemption of the requirement for a report will reduce the cost of these minor alterations where the alterations do no harm and do not make any

noncompliances worse.

Public Hearing Results

Committee Action **As Submitted**

THIS CODE CHANGE WAS HEARD BY THE IBC-STRUCTURAL COMMITTEE.

Committee Reason: Approved as submitted as the proposal adds a needed exception for historic buildings relative to an alteration scoped by Section 602 as a Level 1 alteration. (Vote: 14-0)

Final Hearing Results

EB105-22 AS

EB106-22

Original Proposal

IEBC: 1201.3

Proponents: Mike Jackson, Mike Jackson, FAIA, Association for Preservation Technology (arch419@aol.com)

2021 International Existing Building Code

Revise as follows:

1201.3 Special occupancy exceptions—museums. Where a building in Group R-3 is used for Group A, B or M purposes such as museum tours, exhibits and other public assembly activities, or for museums less than 3,000 square feet (279 m^2) per floor, the occupancy shall be classified as Group B where life safety conditions are approved by the code official in accordance with Section 1201.2. ~~the *code official* is authorized to determine that the occupancy is Group B where life safety conditions can be demonstrated in accordance with Section 1201.2.~~ Adequate means of egress in such buildings, including, but not limited to, a means of maintaining doors in an ~~open~~ unlocked position to permit egress, a limit on building occupancy to an occupant load permitted by the means of egress capacity, a limit on occupancy of certain areas or floors, or supervision by a person knowledgeable in the emergency exiting procedures, shall be provided.

Reason: This code change proposal addresses the size of museums permitted to use the special provision applicable to small historic museums. It is assumed that the original intent was to specify building size *by floor*, similar to other provisions for historic buildings, including accessibility, and how the existing provision is often interpreted. This code change proposal does not alter the requirements of the existing provision.

This clarification will benefit the nation's smallest museums, which are among the nation's most significant historic structures. Limitations related to means of egress, number of occupants, and supervision remain unchanged.

This is one of a series of 6 proposals intended to facilitate use of the code for historic building projects.

Bibliography: APT Building Codes and Historic Preservation Webliography https://www.apti.org/assets/Committees/technicalcommittees/CodesandStandards/2019/Building%20Codes%20and%20Histo%20Webliography.pdf

Cost Impact: The code change proposal will not increase or decrease the cost of construction

This code change proposal has no construction cost impact but will support the ongoing operations of museums. This proposal extends the allowance to larger museum of 3000 sq ft per floor versus 3000 sq feet total. This will allow more museums to safely operate thus making no change or reducing the cost of compliance.

Public Hearing Results

Committee Action **Disapproved**

Committee Reason: The increase to 3000 sq ft per floor was acceptable but there was concern with the removal of the decision making authority for the code official as to whether it can be classified as Group B. Additionally, the committee would like to see a limit to the number of stories to be consistent with the intent of 2 or 3 story buildings . (Vote: 12-1)

Public Comments

Public Comment 2

Proponents: Mike Jackson, Mike Jackson, FAIA, Association for Preservation Technology (arch419@aol.com) requests As Modified by Public Comment

Modify as follows:

2021 International Existing Building Code

1201.3 Special occupancy exceptions—museums. Where a building in Group R-3 is used for Group A, B or M purposes such as museum tours, exhibits and other public assembly activities, or for museums less than 3,000 square feet (279 m^2) per floor and a maximum of three stories the occupancy shall be classified as Group B where life safety conditions are approved by the code official in accordance with Section 1201.2. Adequate means of egress in such buildings, including, but not limited to, a means of maintaining doors in an unlocked position to permit egress, a limit on building occupancy to an occupant load permitted by the means of egress capacity, a limit on occupancy of certain areas or floors, or supervision by a person knowledgeable in the emergency exiting procedures, shall be provided.

Commenter's Reason: The CAH recommended a limit to the size of the building covered by this proposal. Limiting the size of a property to three stories or a total of 9,000 sq. ft. would address this recommendation.

Cost Impact: The net effect of the Public Comment and code change proposal will not increase or decrease the cost of construction This proposal would limit the size of property that is covered by the special occupancy exception for museums.

Final Hearing Results

EB106-22 AMPC2

EB108-22

Original Proposal

IEBC: 1203.2, 1203.12

Proponents: John Swanson, National Fire Sprinkler Association, NFSA (swanson@nfsa.org)

2021 International Existing Building Code

Revise as follows:

1203.2 General. Every *historic building* that does not conform to the construction requirements specified in this code for the occupancy or use and that constitutes a distinct fire hazard as defined herein shall be provided with an *approved* automatic sprinkler ~~fire-extinguishing~~ system as determined appropriate by the *code official*. However, an automatic sprinkler ~~fire-extinguishing~~ system shall not be used to substitute for, or act as an alternative to, the required number of exits from any *facility*.

1203.12 Automatic sprinkler ~~fire-extinguishing~~ systems. Every *historic building* that cannot be made to conform to the construction requirements specified in the *International Building Code* for the occupancy or use and that constitutes a distinct fire hazard shall be deemed to be in compliance if provided with an *approved* automatic sprinkler ~~fire-extinguishing~~ system.

Exception: Where the *code official* approves an alternative life-safety system.

Reason: The intent of this code change proposal is to coordinate terminology between the IBC, IFC and IEBC when referring to “automatic sprinkler system” since this term is used and defined in the International Building Code and International Fire Code. The term “automatic fire-extinguishing system” is typically used for fire protection systems covered in IBC Section 904.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
There are no technical changes to this code section. This proposal is being made to correlate across the I-Codes the term “automatic sprinkler system” as intended.

Public Hearing Results

Committee Action **As Submitted**

Committee Reason: This proposal was approved as it makes the language consistent across the I-Codes for automatic sprinkler systems. (Vote: 14-0)

Final Hearing Results

EB108-22 AS

EB110-22

Original Proposal

IEBC: 1203.3

Proponents: Mike Nugent, Chair, Building Code Action Committee (bcac@iccsafe.org)

2021 International Existing Building Code

Revise as follows:

1203.3 Means of egress. ~~Existing door openings and corridor and stairway widths less than those specified elsewhere in this code may be *approved*, provided that,~~ Where in the opinion of the *code official*, there is sufficient width and height for a person to pass through the opening or traverse the means of egress, existing door openings and corridor and stairway widths are not required to meet the widths required by the *International Building Code* or this code. Where *approved* by the *code official*, the front or main exit doors need not swing in the direction of the path of exit travel, provided that other *approved* means of egress having sufficient capacity to serve the total occupant load are provided.

Reason: There was change EB111-19 that had an editorial correction. This addresses non mandatory language and also addresses the fact that this is likely intending to refer also to the IBC. This proposal also addresses the grammar concern that caused this proposal to disapproved last cycle.
This proposal is submitted by the ICC Building Code Action Committee (BCAC). BCAC was established by the ICC Board of Directors in July 2011 to pursue opportunities to improve and enhance assigned International Codes or portions thereof. In 2020 and 2021 the BCAC has held several virtual meetings open to any interested party. In addition, there were numerous virtual Working Group meetings for the current code development cycle, which included members of the committee as well as interested parties. Related documents and reports are posted on the BCAC website at https://www.iccsafe.org/products-and-services/i-codes/code-development/cs/building-code-action-committee-bcac/.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
This proposal is merely provided to appropriately revise the language to be more mandatory and clearly provide the correct reference to the IBC as intended. This was a follow-up to a similar proposal EB111-19 and is not intended to change the intent of the section to allow reduced door widths in historic buildings therefore the cost of compliance will not change.

Public Hearing Results

Committee Action **As Submitted**

Committee Reason: This proposal was approved based upon the proponents reason statement. (Vote: 14-0)

Final Hearing Results

EB110-22 AS

EB113-22

Original Proposal

IEBC: [BS] 1205.1

Proponents: Gwenyth R. Searer, Wiss, Janney, Elstner Associates, Inc., myself (gsearer@wje.com)

THIS CODE CHANGE WILL BE HEARD BY THE IBC-STRUCTURAL CODE COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THAT COMMITTEE.

2021 International Existing Building Code

Revise as follows:

[BS] 1205.1 General. *Historic buildings* shall comply with the applicable structural provisions for the work as classified in Chapter 4 or 5.

Exceptions:

1. The *code official* shall be authorized to accept existing floors and existing live loads and to approve operational controls that limit the live load on any floor.
2. ~~*Repair of substantial structural damage* is not required to comply with Sections 405.2.3 and 405.2.4.*Substantial structural damage* shall be repaired in accordance with Section 405.2.1.~~Regardless of the level of damage, *repairs* need only comply with Section 405.2.1. *Repairs* need not comply with Section 405.2.1.1 or Sections 405.2.2 through 405.2.6.

Reason: During the development of the 2018 IEBC, proposal EB41-16 was modified by public comment to further clarify that historic buildings are exempt from the then-existing structural upgrade triggers in Chapter 4 that apply to non-historic buildings. The public comment was accepted at the public comment hearings, and was then approved by the voting membership of the ICC.
However, at the same time that the proposal to clarify that historic buildings are exempted from the then-existing structural upgrade triggers, two new triggers -- the disproportionate earthquake damage trigger (now Section 405.2.2) and the snow-load damage trigger (now Section 405.2.5 and Section 405.2.1.1) -- were added to the IEBC, thus unintentionally contravening both the intent of the IEBC and that of the voting membership with respect to historic buildings. This proposal corrects that oversight by simplifying the entire section, referring users to Section 405.2.1 for nearly all repairs, regardless of the level of damage.

As was discussed during the public comment hearing (and even in the committee action hearing prior to that), the intent is to make repair of historic buildings as least onerous as possible. Exemption of historic buildings from upgrade triggers had been in the code for several code cycles; however, the 2018 IEBC made it more clear, except for these two new upgrade triggers. This proposal brings the Exceptions portion of 1205.1 into alignment with the other exceptions and removes an unintended conflict. Note that building officials still retain the ability to order remedy of dangerous conditions; the intent of this proposal (and the prior proposals that came before) is to prevent upgrade triggers from mandating structural interventions that end up destroying the character-defining features of the structures that this chapter is intended to preserve.

This proposal does one other thing: it also exempts qualified historic structures from the flood hazard upgrade trigger associated with substantial damage. This is for the same reason that the historic structures are exempted from the other upgrade triggers -- namely that mandatory upgrade triggers often result in the removal or destruction of the character-defining features that make the structure historic. In editions of the IEBC prior to 2018, Chapter 12 contained fairly clear exceptions to any upgrades; however, it also contained a circular reference to the requirements in then-Chapter 5, which garbled the message. The changes in the 2018 IEBC removed much of the circular references and made the exceptions clear, except that the flood load trigger was NOT excepted. Whether this was by accident or on purpose is not clear; however, the same logic that necessitates the exemption of the other upgrade triggers also necessitates exemption of the flood load trigger for historic structures.

By addressing all of the structural upgrade triggers in a single exception, the intent of Chapter 12 with respect to upgrade triggers is made both clear and streamlined.

Note that a separate proposal by this author attempts to match the existing language in Exception 2; however, that language becomes clunky when all of the various upgrade triggers have to be specifically mentioned. If this proposal is accepted (which is the preferred

solution), the other proposal becomes moot and will be withdrawn.

Cost Impact: The code change proposal will decrease the cost of construction
Because this proposal makes the existing exception to the upgrade triggers broader, this proposal has the potential to decrease the cost of construction for the repairs of historic buildings that experience disproportionate earthquake damage or damage from snow-load-related effects, or that might otherwise trigger flood upgrades as a result of substantial damage. The costs associated with repairs to historic buildings that do not experience disproportionate earthquake damage or snow-load-related damage or *substantial damage* will remain unchanged, as will the cost to repair non-historic buildings.

Public Hearing Results

Committee Action **As Modified**

THIS CODE CHANGE WAS HEARD BY THE IBC-STRUCTURAL COMMITTEE.

Committee Modification:
[BS]1205.1 General. *Historic buildings* shall comply with the applicable structural provisions for the work as classified in Chapter 4 or 5.
Exceptions:

1. The *code official* shall be authorized to accept existing floors and existing live loads and to approve operational controls that limit the live load on any floor.

2. Regardless of the level of damage, structural repairs shall be permitted to return the building to its pre-damage condition without additional work. ~~*repairs* need only comply with Section 405.2.1. *Repairs* need not comply with Section 405.2.1.1 or Sections 405.2.2 through 405.2.6.~~

Committee Reason: Approved as modified as this simplifies and streamlines the code process and clarifies the intent for historic buildings that simply repairing a building to its pre-damage condition is appropriate. The modification provides more direct wording to clarify the intent in place of the reference to language in Chapter 4. (Vote:14-0)

Final Hearing Results

EB113-22 AM

EB114-22

Original Proposal

IEBC: [BS] 1205.1

Proponents: Gwenyth R. Searer, Wiss, Janney, Elstner Associates, Inc., myself (gsearer@wje.com)

THIS CODE CHANGE WILL BE HEARD BY THE IBC-STRUCTURAL CODE COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THAT COMMITTEE.

2021 International Existing Building Code

Revise as follows:

[BS] 1205.1 General. *Historic buildings* shall comply with the applicable structural provisions for the work as classified in Chapter 4 or 5.

Exceptions:

1. The *code official* shall be authorized to accept existing floor~~s~~ and roof framing and ~~existing~~ previously approved live loads and to approve operational controls that limit the live load on any floor or roof.
2. *Repair* of *substantial structural damage* is not required to comply with Sections 405.2.3 and 405.2.4.*Substantial structural damage* shall be repaired in accordance with Section 405.2.1.

Reason: This is a largely editorial change, though it does expressly authorize actions by the code official that have previously been understood to be permitted but were not explicitly mentioned.

The current provision mentions "existing live load", which could be misinterpreted as the live load that is currently present on a given floor, but the intent is to allow the previously approved design live load to be continued, even if it is less than the design live load required for new construction. Further, the current provision does not discuss roofs, which in many historic buildings were not designed for the roof design live loads currently required for new construction. In these cases, it may make sense to create operational controls for maintenance and reroofing activities. For example, operational controls could consist of limiting the number of workers on the roof or limiting the amounts of debris and construction materials that are permitted to be placed on the roof structure during maintenance and reroofing activities. The intent is to permit the code official to allow activities that have historically been permitted, and to allow reasonable operational controls that will enable a historic structure to remain in service without requiring upgrades that may either destroy the character-defining features of the historic structure or that may make maintenance and use of a historic structure cost prohibitive and eventually result in a loss of that historic resource.

Cost Impact: The code change proposal will decrease the cost of construction
Although this proposal is intended largely as an editorial change to clarify that the Building Official has the ability to accept previously approved live loads, it also specifically allows the Building Official to accept operational controls for roofs in addition to interior spaces. Consequently, although this change is in the spirit of the original intent, the proposal specifically allows more leeway and judgment on the part of the Building Official with respect to allowing continued use of historic structures, and thus has at least some potential to reduce the cost of repairs and maintenance of these structures.

Public Hearing Results

Committee Action **As Submitted**

THIS CODE CHANGE WAS HEARD BY THE IBC-STRUCTURAL COMMITTEE.

Committee Reason: Approved as submitted as this proposal provides clarity relative to the exceptions for roof framing of historic building similar to that allowed for existing floors.. (Vote: 14-0)

Public Comments

Public Comment 1

Proponents: Gwenyth R. Searer, Wiss, Janney, Elstner Associates, Inc., myself (gsearer@wje.com) requests As Modified by Public Comment

Modify as follows:

2021 International Existing Building Code

[BS] 1205.1 General. *Historic buildings* shall comply with the applicable structural provisions for the work as classified in Chapter 4 or 5.

Exceptions:

1. The *code official* shall be authorized to accept existing floor and roof framing and previously approved live loads and roof live loads and to approve operational controls that limit the live load ~~on any floor~~ or roof live load.
2. *Repair* of *substantial structural damage* is not required to comply with Sections 405.2.3 and 405.2.4. *Substantial structural damage* shall be repaired in accordance with Section 405.2.1.

Commenter's Reason: Although the Committee supported this proposal unanimously, one Committee member asked me to consider submitting a public comment to clarify that roof live loads are included in this provision and to make the proposal clearer with respect to both live loads and roof live loads. This public comment is to address the Committee member's concern, making sure that roof live loads are included in the ability to have previously approved loads remain in effect, and to allow operational controls over maintenance and re-roofing activities if desired for historic buildings. This was always the intent of my proposal; this public comment makes it clearer and is in line with the Committee's actions and desires.

Cost Impact: The net effect of the Public Comment and code change proposal will decrease the cost of construction
This proposal allows more flexibility for historic buildings, per the original reason statement. This flexibility will decrease costs for historic buildings. The public comment clarifies that roof live loads are included in the provision, which was always the intent, so the proposal combined with the public comments will still increase flexibility and decrease costs for historic buildings.

Final Hearing Results

EB114-22 AMPC1

EB116-22

Original Proposal

IEBC: APPENDIX E (New)

Proponents: Mike Nugent, Chair, Building Code Action Committee (bcac@iccsafe.org); John Williams, Committee on Healthcare (ahc@iccsafe.org); Robert Marshall, FCAC, FCAC (fcac@iccsafe.org)

2021 International Existing Building Code

Add new text as follows:

User notes. About this appendix: The primary purpose for Appendix E is to provide guidance for designers, engineers, architects, fire and building code officials to allow temporary emergency uses of existing buildings or temporary structures with respect to the minimum code requirements. This appendix is intended to serve as that template or checklist for use during an emergency that references the relevant code requirement of concerns.

APPENDIX E TEMPORARY EMERGENCY STRUCTURES AND EMERGENCY USES

SECTION E101
GENERAL

E101.1 Scope. The provisions of this appendix shall apply to the use, construction, installation, alteration, relocation and location of existing buildings or temporary structures and any service utilities or systems that serve such existing buildings or temporary structures during or based on the response to the emergency."

E101.1.1 Objectives. The objective of this Appendix is to provide flexibility for the code official to permit the temporary uses of existing buildings or temporary structures during an emergency to address unusual circumstances that temporarily overwhelms response capabilities of an entity while maintaining the level of safety intended by the code.

E101.1.2 Temporary use. Where temporary uses during emergencies exceed 180 days, judgement shall be used by the code official to allow for temporary uses and conditions to continue for the duration of the emergency based on the needs of the emergency. The code official is authorized to grant extensions for demonstrated cause.

SECTION E102
DEFINITIONS

Add new definition as follows:

EMERGENCY.
Any event declared by local, state, or federal entities that temporarily overwhelms response capabilities, and that require the temporary suspension or modification of regulations, codes, or standards to facilitate response to such an event.

TEMPORARY STRUCTURES.
That which is built, constructed or erected for a period of less than 180 days.

TEMPORARY USE.
An activity or practice that is established at a designated location for a period of less than 180 days. Uses include, but are not limited to, those functional designations listed within the occupancy group descriptions in Section 302.1 of the International Building Code.

Add new text as follows:

SECTION E103
SUBMITTAL DOCUMENTS

E103.1 General. Submittal documents shall be of sufficient clarity to indicate the location, nature and extent of the work or use proposed and show in detail that it will conform to the provisions of this code and relevant laws, ordinances, rules and regulations, as determined by the code official.

SECTION E104
CONFORMANCE

E104.1 Conformance. Temporary use of existing buildings and temporary structures shall conform to the structural strength, fire safety, means of egress, accessibility, light, ventilation, and sanitary requirements of this code as necessary to provide a reasonable level of safety, health, and general welfare as determined by the code official. Tents and other membrane structures shall comply with Sections 3102 and 3103 of the *International Building Code*.

E104.2 Changes over time. As an emergency evolves, submittal documents shall be submitted to demonstrate that the temporary uses of the existing buildings or temporary structures are in compliance with the requirements of the *International Building Code*.

SECTION E105
PERMITS

E105.1 Emergency permits. In an emergency situation, where temporary structures are erected or an existing building undergoes a temporary change of use or occupancy, the *permit* application shall be submitted as soon as practicable to the*code official*. Permits shall be required in accordance with Sections 105.1.1 through 105.1.3.

105.1.1 Temporary structures, other than tents and membrane structures. Temporary structures, other than tents and other membrane structures, that occupy an area greater than 120 square feet (11.16 m^2), shall not be constructed, erected, or relocated for any purpose without obtaining a permit from the code official.

E105.1.2 Tents and membrane structures. Tents and membrane structures shall be permitted in accordance with the*International Fire Code.*

E105.1.3 Existing buildings. An existing buildings shall not be repurposed for a purpose it was not designed for without obtaining a permit from the code official for the change of use or occupancy.

SECTION E106
GENERAL STANDARDS FOR EMERGENCY STRUCTURES

E106.1 Scope. The provisions of Sections E106.2 through E106.7 shall apply to all existing structure being repurposed or temporary structures constructed, erected or relocated to support the response to an emergency.

E106.2 Intent. The intent of this section is to provide a base level of safety in a structure built or repurposed for emergency use.

E106.3 Change of use or occupancy. Existing buildings used in a way that was not originally intended by occupancy class or use shall be allowed without formally changing the occupancy class. The previous occupancy class shall be restored upon the conclusion of the emergency. Where the temporary live load of the floor is more than that required by Section 1607 of the International Building Code for the original use, the area designated for the temporary live load shall be posted with placards for the approved live load.

E106.4 Fire Safety Provisions. Determination of the fire safety requirements by the code official shall be in accordance with Section E106.4.1 through E106.4.5 in order to make determinations of safe conditions rather than strict adherence to the provisions of the International Fire Code.

E106.4.1 Fire safety and evacuation plans. Fire safety and evacuation plans shall be provided in accordance with Section 403 and 404 of the *International Fire Code.* Submittal documents shall be updated where there are any physical changes to the layout of the structure.

E106.4.2 Training and practice drills. Training of staff and practice drills shall comply with Section 405 and 406 of the*International Fire Code.* Structures in place for longer than 30 days shall conduct evacuation drill in accordance with Section 405.3 of the International Fire Code based on the temporary use.

E106.4.3 Fire Protection. An evaluation shall be performed to decide on fire protection needed utilizing NFPA 550.

E106.4.4 Emergency Access. Emergency vehicle access roads shall be approved by the fire code official.

E106.4.5 Fire Watch. A fire watch in accordance with Section 403.11.1 of the*International Fire Code* shall be permitted to be provided in lieu of other fire protection systems.

E106.5 Means of Egress. Means of egress shall comply with Section 1011.5 in addition to Sections E106.5.1 through E106.5.3.

Exception: In Group I-2 occupancies, in areas where corridors are used for movement of care recipients in beds, the clear width of ramps and corridors shall be not less than 48 inches (1219 mm).

E106.5.1 Exit Discharge. Exit discharge shall provide access to a public way, or to a safe dispersal area in accordance with Section 1028.5 of the *International Building Code*

E106.5.2 Means of Egress Lighting. The means of egress shall be illuminated when the space is occupied.

Exception: Sleeping areas.

E106.5.3 Exit Signs. Exit signs shall be provided where the means of egress is not readily identifiable. Exit signs shall be permitted to be illuminated by the lighting provided in the structure.

E106.6 Accessibility. A facility that is constructed to be accessible shall be maintained accessible during occupancy.

E106.7 Temporary connection. The code official shall have the authority to authorize the temporary connection of the building or system to the utility, the source of energy, fuel, or power, or the water system or sewer system in accordance with Section 111. Water closets and lavatories shall be either permanent plumbing fixtures installed within the structure, or temporary water closets or lavatories, such as chemical toilets or other means approved by the code official.

E106.7.1 Portable heating and cooling equipment. Portable heating and cooling equipment shall be used in accordance with their listing, and manufacturer's instructions.

SECTION E107
USE OF SPECIFIC STANDARDS

E107.1 Increased occupant load. Allowing for additional occupants in existing building shall comply with Section E107.1.1 through E107.1.3.

E107.1.1 Authorization. The code official is authorized to allow for an increase in the number of occupants or a change of use in a building or portion of a building during an emergency.

E107.1.2 Maintenance of the means of egress. The existing a means of egress shall be maintained.

E107.1.3 Sleeping areas. Where a space is used for sleeping purposes, the space shall be equipped with smoke alarms in accordance with Sections 907.2.6.2 and 907.2.11 if the International Fire Codeor be provided with a fire watch in accordance with Section 403.11.1 of the *International Fire Code*. Carbon monoxide detectors shall be installed in accordance with Section 915 of the*International Fire Code* where the structure uses any fossil fuel or wood burning appliances.

E107.2 Temporary healthcare facilities. Temporary health care facilities shall comply with Section E107.2.1 and E107.2.2.

E107.2.1 General. Temporary health care facilities shall be erected, maintained and operated to minimize the possibility of a fire emergency requiring the evacuation of occupants.

E107.2.2 Membrane structures under projections. Membrane structures of less than 100 square feet (9.3 m2) shall be permitted tobe placed under projections of a permanent building provided the permanent building is protected with an automatic sprinkler system installed in accordance with Section 903.3.1.1.

E107.3 Use of tiny houses or manufactured homes. Tiny houses or manufactured homes used for temporary housing shall comply with Section E107.3.1 through E107.3.5.

E107.3.1 Fire separation distances. Tiny houses or manufactured homes shall be separated by not less than 5 feet (1524 mm) between structures.

E107.3.2 Fire breaks. Tiny houses and manufactured homesshall not be located in groups of more than 20 units. Fire breaks of at least 20 feet (6096 mm) shall be provided between each group.

E107.3.3 Smoke alarms. Tiny houses and manufactured homes used for sleeping purposes shall be equipped with a smoke alarm complying with Section 907.2.11. of the *International Fire Code*. Smoke detectors are not required to be hard wired.

E107.3.4 Carbon monoxide detectors. Carbon monoxide detectors shall be installed in accordance with Section 915, where the tiny house or manufactured homes uses any fossil fuel or wood burning appliances.

E107.3.5 Structures located in a wildland urban interface zone. Tiny houses and manufactured homes that a relocated in a wildland urban interface area shall be provided with defensible space in accordance with the Section 603 of the International Wildland Urban Interface Code.

E107.4 Tents and membrane structures used as sleeping accommodations. Tents or membrane structures used as sleeping accommodations shall comply with the same requirements as tiny houses in Section E107.3.1 through E107.3.5 and Chapter 31 of the International Fire Code.

SECTION E108
REFERENCED STANDARDS

E108.1 General. See Table E108.1for standards that are referenced in various sections of this appendix. Standards are listed by the standard identification with the effective date, standard title, and the section or sections of this appendix referenced in the standard.

TABLE E108.1 REFERENCED STANDARDS

STANDARD ACRONYM	STANDARD NAME	SECTION REFERENCED HEREIN
NFPA 550-2017	Guide to the Fire Safety Concepts Tree	E106.5.3

Reason: This appendix was originally submitted to IBC as G201-21. Since this proposal extensively dealt with temporary use of existing buildings during an emergency, it was felt it was better suited to IEBC. We believe we have addressed concerns that we learned about during the testimony on the previous proposal and have addressed them in this proposal.
The intent of this appendix is to provide guidance when there are emergencies that exceed the emergencies that the community has planned for. Response must be immediate, so there is not time for the typical plan review and inspection. Existing buildings will be used for occupancies other than they were intended, and temporary structures may need to be erected or brought in to address immediate needs. Recent examples were the housing needs due to mass evacuations during the west coast fires and how hard Covid hit many community health care systems. The user note for this Appendix emphasizes that this is a guidance document for emergencies that exceed pre-planned emergency responses.

The code officials are the people with the experience and knowledge base to identify what can be done and still maintain public health and safety.

This idea is emphasized in Section E101.1.2 and the definition of emergency for this appendix, as well as the modification to the title.

The following revisions were incorporated based on the input received during the hearing:

· The user note states this is a guidance appendix. The idea is used in IFC appendix E and G.

· The title was modified for clarity.

· E101.1.2 – better code language

· Definition for emergency – better code language

· E104.1 was modified to mirror Section 3103.1. This is already permitted by the code. E104.1 has an added sentence clarify that tents and other membrane structures are required to comply with Section 3102 and 3103. These sections also incorporate Chapter 16.

· E104.2 – re-evaluation is not always dependent on additional resources – it could be people being able to return or moving to family.

· E106.1 – This change clarifies that this appendix is applicable to what is happening due to the emergency – not other construction that happens to be occurring at the same time that is not related.

· E106.3 – this modification allows for temporary uses with heavier loading – such as storage of emergency supplies in an office building – where the safe limits are addressed. The change to E104.1 and E106.3 are to address concerns raised by structural engineers about loads.

E106.5 – An exception was created to clarify that in I-2 Occupancies, corridors can be 48” wide in existing buildings. This is consistent with IEBC Section 804.3 for Level 2 Alterations.

· E107.1 – the modification removed ‘temporary waives for’. The criteria was not related to waivers.

· E107.2.2 – better code language

· E107.3 – use defined term for manufactured homes.

· E107.4 – change ‘tiny homes’ to ‘tiny houses’ for consistent terminology

· E107.5 and NFPA 1660 have been removed as they apply to previously anticipated emergencies. This appendix will only address where these plans are exceeded.

This proposal is submitted by the ICC Building Code Action Committee (BCAC), ICC Fire Code Action Committee (FCAC) and the Committee on Healthcare (CHC).

BCAC was established by the ICC Board of Directors in July 2011 to pursue opportunities to improve and enhance assigned International Codes or portions thereof. In 2020 and 2021 the BCAC has held several virtual meetings open to any interested party. In addition, there were numerous virtual Working Group meetings for the current code development cycle, which included members of the committee as well as interested parties. Related documents and reports are posted on the BCAC website at https://www.iccsafe.org/products-and-services/i-codes/code-development/cs/building-code-action-committee-bcac/.The FCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance assigned International Codes with regard to fire and life safety in new and existing buildings and facilities as well as the protection of life and property in wildland urban interface areas. In 2020 and 2021 the Fire-CAC held multiple virtual meetings that were open to any interested party. In addition, there were numerous virtual specific working group meetings that were also open to any interested parties, to develop, discuss and debate the proposed changes. Related documentation and reports are posted on the FCAC website at: https://www.iccsafe.org/products-and-services/i-codes/code-development/cs/fire-code-action-committee-fcac/

The CHC was established by the ICC Board to evaluate and assess contemporary code issues relating to healthcare facilities. This is a joint effort between ICC and the American Society for Healthcare Engineering (ASHE), a subsidiary of the American Hospital Association, to eliminate duplication and conflicts in healthcare regulation. In 2020 and 2021 of the committees as well as any interested parties, to discuss and debate the proposed changes. Information on the CHC, including: meeting agendas; minutes; reports; resource documents; presentations; and all other materials developed in conjunction with the CHC effort can be downloaded from the CHC website at https://www.iccsafe.org/products-and-services/i-codes/code-development/cs/icc-committee-on-healthcare/.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
This appendix is intended to provide a tool to jurisdictions and is not applicable unless adopted. Currently, no formal code requirements provide guidance on how to address. This will provide a framework to make enforcement more consistent and aligned with the requirements of the ICC codes. It was not intended to make compliance more expensive but instead to provide a resource for these emergency situations. These options mirror established ICC codes sections and standards.

Public Hearing Results

Committee Action **As Modified**

Committee Modification:

User notes.
About this appendix: The primary purpose for Appendix E is to provide guidance for designers, engineers, architects, fire and building code officials to allow temporary emergency uses of existing buildings ~~or temporary structures~~ with respect to the minimum code requirements. This appendix is intended to serve as that template or checklist for use during an emergency that references the relevant code requirement of concerns.

APPENDIX E
TEMPORARY ~~EMERGENCY STRUCTURES AND~~ EMERGENCY USES

E101.1 Scope. The provisions of this appendix shall apply to the use, ~~construction,~~ installation, alteration, relocation and location of existing buildings ~~or temporary structures~~ and any service utilities or systems that serve such existing buildings~~or temporary structures~~ during or based on the response to the emergency."

E101.1.1 Objectives. The objective of this Appendix is to provide flexibility for the code official to permit the temporary uses of existing buildings ~~or temporary structures~~ during an emergency to address unusual circumstances that temporarily overwhelms response capabilities of an entity while maintaining the level of safety intended by the code.
~~TEMPORARY STRUCTURES. That which is built, constructed or erected for a period of less than 180 days.~~

E104.1 Conformance. Temporary use of existing buildings ~~and temporary structures~~ shall conform to the structural strength, fire safety, means of egress, accessibility, light, ventilation, and sanitary requirements of this code as necessary to provide a reasonable level of safety, health, and general welfare as determined by the code official. ~~Tents and other membrane structures shall comply with Sections 3102 and 3103 of the *International Building Code*.~~

E104.2 Changes over time. As an emergency evolves, submittal documents shall be submitted to demonstrate that the temporary uses of the existing buildings ~~or temporary structures~~ are in compliance with the requirements of the *International <u>Existing</u> Building Code*.

E105.1 Emergency permits. In an emergency situation, where~~temporary structures are erected or~~ an existing building undergoes a temporary change of use or occupancy, the *permit* application shall be submitted as soon as practicable to the*code official*. Permits shall be required in accordance with Sections 105.1.1 through 105.1.3.

~~**105.1.1Temporary structures, other than tents and membrane structures.** Temporary structures, other than tents and other membrane structures, that occupy an area greater than 120 square feet (11.16 m^2), shall not be constructed, erected, or relocated for any~~

~~purpose without obtaining a permit from the code official.~~

~~E105.1.2Tents and membrane structures.~~ ~~Tents and membrane structures shall be permitted in accordance with the *International Fire Code.*~~

E105.1.3 ~~Existing buildings~~ Change of use or occupancy. An existing building~~s~~ shall not be repurposed for a purpose it was not designed for without obtaining a permit from the code official for the change of use or occupancy.

SECTION E106
GENERAL STANDARDS FOR EMERGENCY ~~STRUCTURES~~ USES

E106.1 Scope. The provisions of Sections E106.2 through E106.7 shall apply to all existing structures being repurposed ~~or temporary~~ and to all structures ~~constructed, erected or~~ relocated to support the response to an emergency.

E106.2 Intent. The intent of this section is to provide a base level of safety in a structure~~built or~~ repurposed for emergency use.

E106.7.1Portable heating, ~~and~~ cooling, and cooking equipment.
Portable heating, ~~and~~ cooling,and cooking equipment shall be used in accordance with Chapter 41 of the International Fire Code, their listing, and manufacturer's instructions.

E107.1.3Sleeping areas.
Where a space is used for sleeping purposes, the space shall be equipped with smoke alarms in accordance with Sections 907.2.6.2 and 907.2.11 if the International Fire Code or be provided with a fire watch in accordance with Section 403.11.1 of the *International Fire Code*. Carbon monoxide alarms ~~detectors~~ shall be installed in accordance with Section 915 of the*International Fire Code* where the structure uses any fossil fuel or wood burning appliances.

E107.3.3Smoke alarms.
Tiny houses and manufactured homes used for sleeping purposes shall be equipped with a smoke alarm complying with Section 907.2.11. of the *International Fire Code*. Smoke alarms ~~detectors~~ are not required to be hard wired.

E107.3.4Carbon monoxide alarms ~~detectors~~.
Carbon monoxide alarm ~~detectors~~ shall be installed in accordance with Section 915, where the tiny house or manufactured homes uses any fossil fuel or wood burning appliances.

~~E107.4 Tents and membrane structures used as sleeping accommodations.~~
~~Tents or membrane structures used as sleeping accommodations shall comply with the same requirements as tiny houses in Section E107.3.1 through E107.3.5 and Chapter 31 of the International Fire Code.~~

Committee Reason: The proposal provides a solid framework for code officials to deal with emergency uses of existing buildings for uses they were not specifically approved such as what was seen during COVID. There was some concern that the term "emergency" may get used to push the limited of code compliance. There was a suggestion that the applicability of the new term CO source as approved for the IFC and IBC with regard to Section E107.1.3 be addressed as it may affect the application of this appendix. Additionally, it was suggested that Sections E101.1.1, E104.1 and E106.2 be reviewed to make more consistent addressing intent. Some clarity was requested as how the restoration to the original occupancy is intended to be addressed. Finally, it was suggested that the emergency permitting procedures in the base code and the relationship to this appendix be reviewed. The modifications address the following issues.
Temporary structures versus temporary uses. The language in the original proposal was revised to remove anything that should comply as a temporary structure in the IBC and IFC. The focus of this proposal is only on temporary emergency uses.

Alarm Terminology. The correct terminology of "alarm" versus "detector" was revised in several sections to address that "detectors" are associated with a system. Alarms are not monitored but instead, where multiple alarms are required, are simply interconnected. These revisions are found in E107.1, E107.3.3 and E107.3.4.

Cooking and heating. Proper reference to the newly created chapter dealing with temporary heating and cooking in Chapter 41 of the

2024 IFC is referenced in Section 106.2 to create proper correlation between the documents.

(Vote: 14-0)

Public Comments

Public Comment 1

Proponents: Mike Nugent, Chair, Building Code Action Committee (bcac@iccsafe.org); John Williams, Committee on Healthcare (ahc@iccsafe.org) requests As Modified by Public Comment

Modify as follows:

2021 International Existing Building Code

User notes. About this appendix: The primary purpose for Appendix E is to provide guidance for designers, engineers, architects, fire and building code officials to allow temporary emergency uses of existing buildings with respect to the minimum code requirements. This appendix is intended to serve as that template or checklist for use during an emergency that references the relevant code requirement of concerns.

APPENDIX E TEMPORARY EMERGENCY USES

SECTION E101
GENERAL

E101.1 Scope. The provisions of this appendix shall apply to the use, installation, alteration, relocation and location of existing buildings and any service utilities or systems that serve such existing buildings during or based on the response to the emergency."

E101.1.1 Objectives. The objective of this Appendix is to provide flexibility for the code official to permit the temporary uses of existing buildings during an emergency to address unusual circumstances that temporarily overwhelms response capabilities of an entity while maintaining the level of safety intended by the code.

E101.1.2 Temporary use. Where temporary uses during emergencies exceed 180 days, judgement shall be used by the code official to allow for temporary uses and conditions to continue for the duration of the emergency based on the needs of the emergency. The code official is authorized to grant extensions for demonstrated cause.

SECTION E102
DEFINITIONS

EMERGENCY.
Any event declared by local, state, or federal entities that temporarily overwhelms response capabilities, and that require the temporary suspension or modification of regulations, codes, or standards to facilitate response to such an event.

TEMPORARY USE.
An activity or practice that is established at a designated location for a period of less than 180 days. Uses include, but are not limited to, those functional designations listed within the occupancy group descriptions in Section 302.1 of the International Building Code.

SECTION E103
SUBMITTAL DOCUMENTS

E103.1 General. Submittal documents shall be of sufficient clarity to indicate the location, nature and extent of the work or use proposed and show in detail that it will conform to the provisions of this code and relevant laws, ordinances, rules and regulations, as determined by the code official.

SECTION E104
CONFORMANCE

E104.1 Conformance. Temporary use of existing buildings shall conform to the structural strength, fire safety, means of egress, accessibility, light, ventilation, and sanitary requirements of this code as necessary to provide a reasonable level of safety, health, and general welfare as determined by the code official.

E104.2 Changes over time. As an emergency evolves, submittal documents shall be submitted to demonstrate that the temporary uses of the existing buildings are in compliance with the requirements of the *International Existing Building Code*.

SECTION E105
PERMITS

E105.1 Emergency permits. In an emergency situation, where an existing building undergoes a temporary change of use or occupancy, the *permit* application shall be submitted as soon as practicable to the*code official*. ~~Permits shall be required in accordance with Sections 105.1.1 through 105.1.3.~~

~~**E105.1.1 Change of use or occupancy.** An existing building shall not be repurposed for a purpose it was not designed for without obtaining a permit from the code official for the change of use or occupancy.~~

SECTION E106
GENERAL STANDARDS FOR EMERGENCY USES

E106.1 Scope. The provisions of Sections E106.2 through E106.7 shall apply to all existing structures being repurposed and to all structures relocated to support the response to an emergency.

E106.2 Intent. The intent of this section is to provide a~~base~~ reasonable level of safety in a structure repurposed for emergency use.

E106.3 Change of use or occupancy. Existing buildings used in a way that was not originally intended bythe occupancy ~~class~~ or use shall be allowed without formally changing the occupancy ~~class~~. The previous occupancy and use ~~class~~ shall ~~be restored~~ resume upon the conclusion of the emergency. Where the temporary live load of the floor is more than that required by Section 1607 of the International Building Code for the original use, the area designated for the temporary live load shall be posted with placards for the approved live load.

E106.4 Fire Safety Provisions. Determination of the fire safety requirements by the code official shall be in accordance with Section E106.4.1 through E106.4.5 in order to make determinations of safe conditions rather than strict adherence to the provisions of the International Fire Code.

E106.4.1 Fire safety and evacuation plans. Fire safety and evacuation plans shall be provided in accordance with Section 403 and 404 of the *International Fire Code.* Submittal documents shall be updated where there are any physical changes to the layout of the structure.

E106.4.2 Training and practice drills. Training of staff and practice drills shall comply with Section 405 and 406 of the*International Fire Code.* Structures in place for longer than 30 days shall conduct evacuation drill in accordance with Section 405.3 of the International Fire Code based on the temporary use.

E106.4.3 Fire Protection. An evaluation shall be performed to decide on fire protection needed utilizing NFPA 550.

E106.4.4 Emergency Access. Emergency vehicle access roads shall be approved by the fire code official.

E106.4.5 Fire Watch. A fire watch in accordance with Section 403.11.1 of the*International Fire Code* shall be permitted to be provided in lieu of other fire protection systems.

E106.5 Means of Egress. Means of egress shall comply with Section 1011.5 in addition to Sections E106.5.1 through E106.5.3.

Exception: In Group I-2 occupancies, in areas where corridors are used for movement of care recipients in beds, the clear width of ramps and corridors shall be not less than 48 inches (1219 mm).

E106.5.1 Exit Discharge. Exit discharge shall provide access to a public way, or to a safe dispersal area in accordance with Section 1028.5 of the *International Building Code*

E106.5.2 Means of Egress Lighting. The means of egress shall be illuminated when the space is occupied.

Exception: Sleeping areas.

E106.5.3 Exit Signs. Exit signs shall be provided where the means of egress is not readily identifiable. Exit signs shall be permitted to be illuminated by the lighting provided in the structure.

E106.6 Accessibility. A facility that is constructed to be accessible shall be maintained accessible during occupancy.

E106.7 Temporary connection. The code official shall have the authority to authorize the temporary connection of the building or system to the utility, the source of energy, fuel, or power, or the water system or sewer system in accordance with Section 111. Water closets and lavatories shall be either permanent plumbing fixtures installed within the structure, or temporary water closets or lavatories, such as chemical toilets or other means approved by the code official.

E106.7.1 Portable heating, cooling and cooking equipment. Portable heating, cooling, and cooking equipment shall be used in accordance with ~~Chapter 41 of~~ the International Fire Code, their listing, and manufacturer's instructions.

SECTION E107
USE OF SPECIFIC STANDARDS

E107.1 Increased occupant load. Allowing for additional occupants in existing building shall comply with Section E107.1.1 through E107.1.3.

E107.1.1 Authorization. The code official is authorized to allow for an increase in the number of occupants or a change of use in a building or portion of a building during an emergency.

E107.1.2 Maintenance of the means of egress. The existing a means of egress shall be maintained.

E107.1.3 Sleeping areas. Where a space is used for sleeping purposes, the space shall be equipped with smoke alarms in accordance with Sections 907.2.6.2 and 907.2.11 if the International Fire Code or be provided with a fire watch in accordance with Section 403.11.1 of the *International Fire Code*. Carbon monoxide alarms shall be installed in accordance with Section 915 of the*International Fire Code* where the structure uses any fossil fuel or wood burning appliances.

E107.2 Temporary healthcare facilities. Temporary health care facilities shall comply with Section E107.2.1 and E107.2.2.

E107.2.1 General. Temporary health care facilities shall be erected, maintained and operated to minimize the possibility of a fire emergency requiring the evacuation of occupants.

E107.2.2 Membrane structures under projections. Membrane structures of less than 100 square feet (9.3 m2) shall be permitted tobe placed under projections of a permanent building provided the permanent building is protected with an automatic sprinkler system installed

in accordance with Section 903.3.1.1.

E107.3 Use of tiny houses or manufactured homes. Tiny houses or manufactured homes used for temporary housing shall comply with Section E107.3.1 through E107.3.5.

E107.3.1 Fire separation distances. Tiny houses or manufactured homes shall be separated by not less than 5 feet (1524 mm) between structures.

E107.3.2 Fire breaks. Tiny houses and manufactured homesshall not be located in groups of more than 20 units. Fire breaks of at least 20 feet (6096 mm) shall be provided between each group.

E107.3.3 Smoke alarms. Tiny houses and manufactured homes used for sleeping purposes shall be equipped with a smoke alarm complying with Section 907.2.11. of the *International Fire Code*. Smoke alarms are not required to be hard wired.

E107.3.4 Carbon monoxide alarms. Carbon monoxide alarms shall be installed in accordance with Section 915, where the tiny house or manufactured homes uses any fossil fuel or wood burning appliances.

E107.3.5 Structures located in a wildland urban interface zone. Tiny houses and manufactured homes that a relocated in a wildland urban interface area shall be provided with defensible space in accordance with the Section 603 of the International Wildland Urban Interface Code.

SECTION E108
REFERENCED STANDARDS

E108.1 General. See Table E108.1for standards that are referenced in various sections of this appendix. Standards are listed by the standard identification with the effective date, standard title, and the section or sections of this appendix referenced in the standard.

TABLE E108.1 REFERENCED STANDARDS

STANDARD ACRONYM	STANDARD NAME	SECTION REFERENCED HEREIN
NFPA 550-2017	Guide to the Fire Safety Concepts Tree	E106.5.3

Commenter's Reason: This proposal was supported overall, however there were suggestions from the committee and proponents that BCAC wishes to address.
The complete proposal is shown in the public comment so that everyone can see the modified proposal in total.

E105.1 and E105.1.1 - There was a floor modification to delete the references to tents and membrane structures. This floor modification deleted two of the three items in Section 105.1. Therefore, the reference to the three subsections needs to be deleted. The text in E105.1.1 is not needed, because a planned change of occupancy is currently addressed in the IEBC.

There was a suggestion to revise this section to be consistent with IEBC Section 105.2.1, however, since how fast someone could be prepared to submit a permit, or the building department ready to operate as usual depends a great deal on the extent of the emergency. Therefore, 'as soon as practicable' is a reasonable allowance.

E106.2 - A committee member suggested that Sections E104.1 and E106.2 use the same terminology for safety, thus the modification proposed to E106.2.E106.3 - The requirements allow for a temporary change of occupancy or use - 'class' is not a term used in the code, so it has been deleted.

E106.7.1 - The new IFC Chapter 41 (F188-21 AS) deals with temporary heating and cooking, but not cooling. Therefore a general reference to the IFC is more appropriate than a specific reference to Chapter 41.

There was a suggestion that the definition of 'emergency' was too broad. However, this is an appendix intended for guidance. Therefore, BCAC felt that this definition should be open to address any emergency that the community faces. No one thought we would ever have to deal with such large wildfires or Covid over the last couple of years. We do not know what we will face.

Cost Impact: The net effect of the Public Comment and code change proposal will not increase or decrease the cost of construction

This appendix is intended to provide a tool to jurisdictions and is not applicable unless adopted. Currently, no formal code requirements provide guidance on how to address. This will provide a framework to make enforcement more consistent and aligned with the requirements of the ICC codes. It was not intended to make compliance more expensive but instead to provide a resource for these emergency situations. These options mirror established ICC codes sections and standards.

Final Hearing Results

EB116-22 AMPC1

ADM1-22 Part I

Original Proposal

IBC: SECTION 202; IEBC: SECTION 202 (New); IFC: SECTION 202; IFGC: SECTION 202 (New); IMC: SECTION 202 (New); ISPSC: SECTION 202 (New)

Proponents: Jonathan Roberts, UL LLC, UL LLC (jonathan.roberts@ul.com)

THIS IS A 2 PART CODE CHANGE. PART I WILL BE HEARD BY THE ADMINISTRATIVE CODE COMMITTEE. PART II WILL BE HEARD BY THE IRC-BUILDING CODE COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THESE COMMITTEES.

2021 International Existing Building Code

Add new definition as follows:

[A] LISTED.
Equipment, materials, products or services included in a list published by an organization acceptable to the code official and concerned with evaluation of products or services that maintains periodic inspection of production of listed equipment or materials or periodic evaluation of services and whose listing states either that the equipment, material, product or service meets identified standards or has been tested and found suitable for a specified purpose. Terms that are used to identify listed equipment, products, or materials include “listed”, “certified”, “classified” or other terms as determined appropriate by the listing organization.

Reason: The proposed revision to the definitions for “Listed” recognizes that listing organizations may use other terms to identify “listed” equipment, products, or materials. Two examples of other terms used meet the definition of listed include “certified” and “classified”. The term “certified” is a more globally recognized term used by listing organizations compared to the term “listed”. The term “classified” has historically referred to building materials evaluated for specific performance aspects such as surface burning characteristics that has also been accepted by code officials as meeting the definition of “Listed".

Cost Impact: The code change proposal will not increase or decrease the cost of construction
This is simply modifying the existing definitions of Listed, and adding a definition of Listed where one does not exist.

Public Hearing Results

Committee Action **As Submitted**

Committee Reason: The committee stated that the reason for approval was that the addition of the terminology improves the definition and is something that is needed. (Vote: 8-5)

Final Hearing Results

ADM1-22 Part I AS

ADM7-22 Part I

Original Proposal

ICCPC: 101.3.3 (New); IEBC: 101.2.1 (New), [A] 101.6; IFGC: [A] 101.3; IPC: [A] 101.2, 101.2.1 (New); IPMC: 101.2.1 (New); ISPSC: 101.2.1 (New); IGCC: 101.3.2 (New)

Proponents: Mike Nugent, Chair, Building Code Action Committee (bcac@iccsafe.org)

THIS IS A 2 PART CODE CHANGE. PART I WILL BE HEARD BY THE ADMINISTRATIVE CODE COMMITTEE. PART II WILL BE HEARD BY THE IRC-BUILDING CODE COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THESE COMMITTEES.

2021 International Existing Building Code

Add new text as follows:

101.2.1 Appendices. Provisions in the appendices shall not apply unless specifically adopted.

Delete without substitution:

~~**[A] 101.6 Appendices.** The *code official* is authorized to require retrofit of buildings, structures or individual structural members in accordance with the appendices of this code if such appendices have been individually adopted.~~

Reason: Appendices are in all of the codes except for IZC. The intent is to put information about their adoption for inclusion in the same location in all of the codes immediately following the section on scope. This is already the case in the IBC, IFC, IMC, IPSDC and IWUIC. This section is added to ICCPC, IGCC, IPMC, and ISPSC. This section is relocated in the IEBC, IFGC, IPC and IRC. This will also be proposed to the first public draft of the IECC.

This proposal is submitted by the ICC Building Code Action Committee (BCAC) and ICC Plumbing/Mechanical/Gas Code Action Committee (PMGCAC).

BCAC was established by the ICC Board of Directors in July 2011 to pursue opportunities to improve and enhance assigned International Codes or portions thereof. In 2020 and 2021 the BCAC has held several virtual meetings open to any interested party. In addition, there were numerous virtual Working Group meetings for the current code development cycle, which included members of the committee as well as interested parties. Related documents and reports are posted on the BCAC website at https://www.iccsafe.org/products-and-services/i-codes/code-development/cs/building-code-action-committee-bcac/.

The PMG CAC was established by the ICC Board of Directors in July 2011 to pursue opportunities to improve and enhance assigned International Codes or portions thereof. In 2020 and 2021, the PMGCAC has held several virtual meetings open to any interested party. Numerous interested parties attended the committee meetings and offered their input.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
This is an editorial coordination item.

Public Hearing Results

Committee Action **As Modified**

Committee Modification: 2021 International Existing Building Code

101.2.1 Appendices. Provisions in the appendices shall not apply unless specifically adopted or referenced.

2021 International Code Council Performance Code

~~**101.3.3 Appendices.** Provisions in the appendices shall not apply unless specifically adopted.~~

Committee Reason: The committee stated that the reason for the approval of the first modification was that the performance code does have mandatory requirements in the appendices so that proposed section is not necessary. The stated reason for the approval of the second modification was that if an appendix is specifically referenced in the code you do need to have the authority to enforce it. The stated reason for the approval of the proposal was that it clarifies the code by allowing the codes to be more interactive which as a code set makes good sense. (Vote: 12-1)

Final Hearing Results

ADM7-22 Part I AM

ADM13-22 Part I

Original Proposal

IBC: SECTION 104, 202; IEBC: SECTION 104, 202; IFC: SECTION 104, 202; IPMC: SECTION 105, 202; IWUIC: SECTION 104, 105, 202; IZC: [A] 104.7, [A] 104.7.1; IGCC: SECTION 104

Proponents: Robert Marshall, representing FCAC (fcac@iccsafe.org); Mike Nugent, representing Building Code Action Committee (bcac@iccsafe.org); Jeffrey Shapiro, representing Lake Travis Fire Rescue (jeff.shapiro@intlcodeconsultants.com)

THIS IS A 2 PART CODE CHANGE. PART I WILL BE HEARD BY THE ADMINISTRATIVE CODE COMMITTEE. PART II WILL BE HEARD BY THE IRC-BUILDING CODE COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THESE COMMITTEES.

Primary sections and titles shown as deleted include the deletion of all sections and subsections within them. For clarity, the full text of these deletions are not shown.

2021 International Existing Building Code

Add new definition as follows:

APPROVED AGENCY. An established and recognized organization that is regularly engaged in conducting tests, furnishing inspection services or furnishing product evaluation or certification where such organization has been approved by the code official.

PEER REVIEW. An independent and objective technical review conducted by an approved third party.

Revise as follows:

~~SECTION 104~~
~~DUTIES AND POWERS OF THE CODE OFFICIAL~~
(Delete entire section and replace as follows)

Add new text as follows:

SECTION 104
DUTIES AND POWERS OF THE CODE OFFICIAL

[A] 104.1 General. The code official is hereby authorized and directed to enforce the provisions of this code.

[A] 104.2 Determination of Compliance. The code official shall have the authority to determine compliance with this code, to render interpretations of this code and to adopt policies, procedures, rules and regulations in order to clarify the application of this code's provisions. Such interpretations, policies, procedures, rules and regulations:

1. Shall be in compliance with the intent and purpose of this code.
2. Shall not have the effect of waiving requirements specifically provided for in this code.

[A] 104.2.1 Listed compliance. Determination of compliance for anything required by this code, or a reference standard, to be listed shall be based on a test standard or approved listing evaluation that is germane to the provision requiring the listing. Anything required by this code, or a reference standard, to be listed shall be installed in accordance with the listing and the manufacturer's instructions. Copies of the listing standard and manufacturer's instructions shall be made available to the code official upon request.

[A] 104.2.2 Technical assistance. To determine compliance with this code, the code official is authorized to require the owner or owner's authorized agent to provide a technical opinion and report.

[A] 104.2.2.1 Cost. A technical opinion and report shall be provided without charge to the jurisdiction.

[A] 104.2.2.2 Preparer qualifications. The technical opinion and report shall be prepared by a qualified engineer, specialist, laboratory or fire safety specialty organization acceptable to the code official. The code official is authorized to require design submittals to be prepared by, and bear the stamp of, a registered design professional.

[A] 104.2.2.3 Content. The technical opinion and report shall analyze the fire safety properties of the design, operation or use of the building or premises and the facilities and appurtenances situated thereon, to identify and propose necessary recommendations.

[A] 104.2.2.4 Tests. Where there is insufficient evidence of compliance with the provisions of this code, the code official is authorized to require tests as evidence of compliance. Test methods shall be as specified in this code or by other recognized test standards. In the absence of recognized test standards, the code official shall approve the testing procedures. Tests shall be performed by a party acceptable to the code official.

[A] 104.2.3 Alternative materials, design and methods of construction, and equipment. The provisions of this code are not intended to prevent the installation of any material or to prohibit any design or method of construction not specifically prescribed by this code, provided that any such alternative is not specifically prohibited by this code and has been approved.

[A] 104.2.3.1 Approval authority. An alternative material, design or method of construction shall be approved where the code official finds that the proposed alternative is satisfactory and complies with Sections 104.2.3.2 through 104.2.3.7, as applicable.

[A] 104.2.3.2 Application and disposition. A request to use an alternative material, design or method of construction shall be submitted in writing to the code official for approval. Where the alternative material, design or method of construction is not approved, the code official shall respond in writing, stating the reasons the alternative was not approved.

[A] 104.2.3.3 Compliance with code intent. An alternative material, design or method of construction shall comply with the intent of the provisions of this code.

[A] 104.2.3.4 Equivalency criteria. An alternative material, design or method of construction shall, for the purpose intended, be not less than the equivalent of that prescribed in this code with respect to all of the following, as applicable:

1. Quality
2. Strength
3. Effectiveness
4. Durability
5. Safety

[A] 104.2.3.4.1 Fire safety equivalency. Determination of safety equivalency, with respect to fire, shall be based on an analysis that includes applicable fire safety performance properties, such as but not limited to ignitability, flame spread, heat release rate, heat of combustion, smoke development, and fire resistance. Determination of safety equivalency, with respect to structural fire safety, shall also include a structural system analysis.

[A] 104.2.3.5 Tests. Tests conducted to demonstrate equivalency in support of an alternative material, design or method of construction application shall be of a scale that is sufficient to predict performance of the end use configuration. Tests shall be performed by a party acceptable to the code official.

[A] 104.2.3.6 Reports. Supporting documentation, where necessary to assist in the approval of materials or assemblies not specifically

provided for in this code, shall comply with Sections 104.2.3.6.1 and 104.2.3.6.2.

[A] 104.2.3.6.1 Evaluation reports. Evaluation reports shall be issued by an approved agency accredited to evaluate or certify products. The alternative material, design or method of construction and product evaluated shall be within the scope of accreditation of the approved agency. Criteria used for the evaluation shall be identified within the report, developed using a process that includes input from the public, and made available for review by the public.

[A] 104.2.3.6.2 Other reports. Reports not complying with Section 104.2.3.6.1 shall describe criteria, including but not limited to any referenced testing or analysis, used to determine compliance with code intent and justify code equivalence. The report shall be prepared by a qualified engineer, specialist, laboratory or fire safety specialty organization acceptable to the fire code official. The code official is authorized to require design submittals to be prepared by, and bear the stamp of, a registered design professional.

[A] 104.2.3.7 Peer review. The code official is authorized to require submittal of a peer review report in conjunction with a request to use an alternative material, design or method of construction, prepared by a peer reviewer that is approved by the code official.

[A] 104.2.4 Modifications. Where there are practical difficulties involved in carrying out the provisions of this code, the code official shall have the authority to grant modifications for individual cases, provided that the code official shall first find that one or more special individual reasons make the strict letter of this code impractical, that the modification is in compliance with the intent and purpose of this code, and that such modification does not lessen health, accessibility, life and fire safety, or structural requirements. The details of the written request for and action granting modifications shall be recorded and entered in the files of the department of building safety.

[A] 104.2.4.1 Flood hazard areas. For existing buildings located in flood hazard areas for which repairs, alterations and additions constitute substantial improvement, the code official shall not grant modifications to provisions related to flood resistance unless a determination is made that:

1. The applicant has presented good and sufficient cause that the unique characteristics of the size, configuration or topography of the site render compliance with the flood-resistant construction provisions inappropriate.
2. Failure to grant the modification would result in exceptional hardship.
3. The granting of the modification will not result in increased flood heights, additional threats to public safety, extraordinary public expense nor create nuisances, cause fraud on or victimization of the public, or conflict with existing laws or ordinances.
4. The modification is the minimum necessary to afford relief, considering the flood hazard.

A written notice will be provided to the applicant specifying, if applicable, the difference between the design flood elevation and the elevation to which the building is to be built, stating that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced floor elevation and that construction below the design flood elevation increases risks to life and property.

[A] 104.3 Applications and permits. The code official is authorized to receive applications, review construction documents and issue permits for the repair and construction regulated by this code; inspect the premises for which such permits have been issued; and enforce compliance with the provisions of this code.

[A] 104.3.1 Determination of substantially improved or substantially damaged existing buildings and structures in flood hazard areas. For applications for reconstruction, rehabilitation, repair, alteration, addition or other improvement of existing buildings or structures located in flood hazard areas, the code official shall determine where the proposed work constitutes substantial improvement or repair of substantial damage. Where the code official determines that the proposed work constitutes substantial improvement or repair of substantial damage, and where required by this code, the code official shall require the building to meet the requirements of Section 1612 of the International Building Code, or Section R322 of the International Residential Code, as applicable.

[A] 104.3.2 Preliminary meeting. When requested by the permit applicant or the code official, the code official shall meet with the permit applicant prior to the application for a construction permit to discuss plans for the proposed work or change of occupancy in order to establish the specific applicability of the provisions of this code.

Exception: Repairs and Level 1 alterations.

[A] 104.3.3 Building evaluation. The code official is authorized to require an existing building to be investigated and evaluated by a registered design professional based on the circumstances agreed on at the preliminary meeting. The design professional shall notify the code official if any potential noncompliance with the provisions of this code is identified.

[A] 104.4 Right of entry. Where it is necessary to make an inspection to enforce the provisions of this code, or where the code official has reasonable cause to believe that there exists in a structure or on a premises any conditions or violations of this code that makes the structure or premises unsafe, dangerous or hazardous, the code official shall have the authority to enter the structure or premises at all reasonable times to inspect or to perform the duties imposed on the code official by this code. If such structure or premises is occupied, the code official shall present credentials to the occupant and request entry. If such structure or premises be unoccupied, the code official shall first make a reasonable effort to locate the owner, the owner's authorized agent or other person having charge or control of the structure or premises and request entry. If entry is refused, the code official shall have recourse to every remedy provided by law to secure entry.

[A] 104.4.1 Warrant. Where the code official has first obtained a proper inspection warrant or other remedy provided by law to secure entry, an owner, the owner's authorized agent or occupant or person having charge, care or control of the building or premises shall not fail or neglect, after proper request is made as herein provided, to permit entry therein by the code official for the purpose of inspection and examination pursuant to this code.

[A] 104.5 Identification. The code official shall carry proper identification when inspecting structures or premises in the performance of duties under this code.

[A] 104.6 Notices and orders. The code official is authorized to issue such notices or orders as are required to affect compliance with this code in accordance with Section 113.

[A] 104.7 Official records. The code official shall keep official records as required by Sections 104.7.1 through 104.7.5. Such official records shall be retained for not less than 5 years or for as long as the structure or activity to which such records relate remains in existence, unless otherwise provided by other regulations.

[A] 104.7.1 Approvals. A record of approvals shall be maintained by the code official and shall be available for public inspection during business hours in accordance with applicable laws.

[A] 104.7.2 Inspections. The code official shall keep a record of each inspection made, including notices and orders issued, showing the findings and disposition of each.

[A] 104.7.3 Code alternatives and modifications. Application for alternative materials, design and methods of construction and equipment in accordance with Section 104.2.3; modifications in accordance with Section 104.2.4; and documentation of the final decision of the code official for either shall be in writing and shall be officially recorded in the permanent records of the code official.

[A] 104.7.4 Tests. The code official shall keep a record of tests conducted to comply with Sections 104.2.2.4 and 104.2.3.5.

[A] 104.7.5 Fees. The code official shall keep a record of fees collected and refunded in accordance with Section 108.

[A] 104.8 Liability. The code official, member of the Board of Appeals, officer or employee charged with the enforcement of this code, while acting for the jurisdiction, in good faith and without malice in the discharge of the duties required by this code or other pertinent law or ordinance, shall not thereby be personally liable, either civilly or criminally, and is hereby relieved from personal liability for any damage accruing to persons or property as a result of any act or by reason of an act or omission in the discharge of official duties.

[A] 104.8.1 Legal defense. Any suit or criminal complaint instituted against any officer or employee because of an act performed by that officer or employee in the lawful discharge of duties and under the provisions of this code or other laws or ordinances implemented through the enforcement of this code shall be defended by legal representatives of the jurisdiction until the final termination of the proceedings. The code official or any subordinate shall not be liable for costs in any action, suit or proceeding that is instituted in pursuance of the provisions of this code.

[A] 104.9 Approved materials and equipment. Materials, equipment and devices approved by the code official shall be constructed and installed in accordance with such approval.

[A] 104.9.1 Material and equipment reuse. Materials, equipment and devices shall not be reused unless such elements are in good working condition and approved.

Reason: Section 104 (Section 105 in the IPMC) appears in the IFC, IWUIC, IBC, IEBC, IRC, IgCC and IPMC and contains general requirements for the authority and duties of the code official. Among these authorities and duties is the review and approval of alternate methods. The primary purpose of this code change is to update Section 104 to reflect the current manner that alternate methods and materials are evaluated, and to differentiate between evaluations from accredited evaluation agencies and evaluations from others, such as engineers. These provisions have basically been the same since the first edition in 2000, with the exception that the section on "Research Reports" was added in 2003. Industry terminology and methods have evolved over the years.
This proposal revises general code enforcement provisions to improve organization, improve clarity, and supplement existing provisions to better align the code text with how the code is commonly applied. The end goal is to provide the same wording and procedures in all of the I-Codes with regard to the Duties and Responsibilities of the Code Official. Some of the codes contain unique provisions applicable to only that code. Those nuances are retained so there are some slight differences, but the formatting will be the same in each code and the language will generally bee the same in each code.

As stated earlier, this section has been in the code a long time, and it is believed that it initially envisioned an alternative product or method review and approval process on a project-by-project basis, with substantiating tests and calculations or analyses provided with each permit application. Currently, a more efficient system has evolved where the same product evaluation reports are used in numerous projects, across many jurisdictions, and for many conditions. This evolution causes the need to revise this section to reflect current procedures.

However, the need for designers to be able to apply for one-time approval needs to be maintained, and that is the reason that "research reports" is maintained. In this case, though, when a method or material is not addressed by the code, the code official needs more information on the process that the evaluator used to determine that the method or material complies with the intent of the code.

To achieve the common format, a template is shown below which includes comments on each of the sections. Since the wording in each code is intended to be the same, the outline is not shown for every code, however there is an underline/strikeout version for each code provided. The code change for each code is provided as delete and substitute. This was done because the autoformatting process in cdpACCESS did not provide a document to easily follow. The underline/strikeout versions show the specific changes.

The following template is from the IBC. The IBC, IFC, IRC, IEBC, IPMC, and IWUIC are formatted the same as this template, however some codes have additional unique provisions, and other codes don't contain all of these sections if they are not appropriate for the code content.

OUTLINE FOR PROPOSED SECTION 104

SECTION 104 DUTIES AND POWERS OF BUILDING OFFICIAL – same title used for each code

104.1 General. – This section has been subdivided with numbered/titled subsections to break up the existing paragraph and specifically state that the code official is authorized to determine compliance with the code. While always implied and applied in this manner, the code never specifically states this important fact.

104.2 Determination of Compliance. – reformatted to identify that when reviewing projects for compliance with the code, the code official can develop policies and procedures. It also specifically states that the developed policies and the project approvals are to be based on the intent of the code.

~~104.2.1~~ Listed compliance. – In cases where the code specifies a listing standard, it is common for a code official to accept things listed to that standard without further evaluating whether the standard is germane. When a product listing is appropriate, then the fact that the product is listed and installed in accordance with the listing specifications and the manufacturer's instructions becomes the approval of the product. This section is not included in all codes since not all codes require listed equipment.

~~104.2.2~~ Technical assistance. – Nearly all the codes provide for the code official to utilize technical assistance in some form or another. This section is included as a subsection for determining compliance and will be consistent throughout the I-Codes. It is derived from, and replaces, previous text that was originally developed for and limited to hazardous materials related provisions.

104.2.2.1 Cost. – the cost for technical assistance is borne by the applicant or owner. This was previously included in a preceding paragraph and has been separated into its own subsection.

104.2.2.2 Preparer qualifications. – states that the person or agency providing the technical report must be qualified. The code official has the ability to require that the report is stamped by a registered design professional, since not all reports may need to provide this. For example, a hazardous materials classification report often does not include engineering or design. The definition is added to codes that do not currently contain the definition, such as the IWUIC. This was previously included in a preceding paragraph and has been separated into its own subsection. The new text goes beyond simply recommending changes, recognizing that the report may be a source document, as opposed to a review of documentation prepared by others.

104.2.2.3 Content. – the technical report shall include an analysis and any recommended or necessary changes.

104.2.2.4 Tests. – Tests can often provide valuable information. Where a test standard isn't specified by this code or a reference standard, the code official may wish to conduct further evaluation of the suitability of the test method used as a basis. Testing can be performed by an approved agency or by any other party/organization approved by the code official. Proposed provisions for tests are largely derived from existing code text on this topic.

~~104.2.3 104.11~~ Alternative materials, design and methods of construction and equipment. – All codes make reference to accepting some type of alternative. This section is placed under the general compliance approval section and revised to state that a proposed alternative cannot be something that is specifically prohibited by the code. If ICC members have previously voted to specifically disallow something, alternative methods should not be a means of avoiding such a prohibition. Nevertheless, a code modification would still provide an option to make exceptions for unique cases, as opposed to the door being open for an applicant to end run the intent of the code by presenting an analysis or alternative that suggests an alternative to a prohibition is OK. It is important to note that something not contemplated by the code would not be impacted by this statement. Not contemplated is not the same as a specific prohibition in the code.

104.2.3.1 Approval authority. – if the alternative is acceptable, then it is to be approved by the code official. This is from existing text.

104.2.3.2 Application and disposition. – the submittal for an alternative must be accomplished in writing. If it is not approved, the code official must so state in writing and provide reasons why it was not acceptable. This is largely from existing text, however, the requirement for a written application for alternatives was not previously located in this section, where it is appropriate to reference.

104.2.3.3 Compliance with code intent. – the alternative must comply with the code's intent.

104.2.3.4 Equivalency criteria. – the alternative must provide equivalency to the code's provisions. The list of characteristics to be addressed is included from the current code. The reference to fire-resistance is removed from the list and fire-resistance is included under safety with additional criteria regarding fire characteristics identified in Section 104.2.3.4.1.

104.2.3.4.1 Fire safety equivalency. – this section was added because "fire-resistance" was removed from the list in Section 104.2.3.4 and recognizing that fire-resistance is not the only fire related characteristic to be addressed. Fire-resistance is only one characteristic of safety with respect to fire. This section is added to clarify that the entire issue of performance under fire conditions is the concern. Previously, aspects of fire safety beyond fire resistance would have been evaluated as part of "safety" in the list with no additional guidance on what to consider. Performance under fire conditions also includes equivalency as to how the alternate will perform structurally when exposed to fire.

104.2.3.5 Tests. – this section is added so the code official can ensure that any testing conducted is performed to a scale that adequately represents the end use of the alternate. This has primarily been added in response to concerns related to Code Change F60-21, which modified Section 2603 to defer alternatives related to fire performance of foam plastics to Section 104.

104.2.3.6 ~~104.11.1 Research~~ Reports. This section is relocated and revised to address two different types of reports currently submitted for alternatives.

104.2.3.6.1 Evaluation reports. – This section is added to address reports generate by an approved agency. The definition of "approved agency" was added to several codes in the 2018 editions. The definition is proposed to be revised, as in the IBC, or added as a new definition codes do not contain this definition, as in the IFC. This evaluation report is conducted by an approved agency that is accredited to conduct the tests or evaluations appropriate for the alternative involved. When the applicant provides a product evaluation from an accredited product evaluation agency that uses publicly developed and available criteria for the evaluation, the code official may have increased confidence that the method used for the evaluation does result in a method or material that meets the intent of the code and is at least equivalent to code-prescribed construction. Public development of criteria allows for input from industry experts, the public, and building officials in determining the methods used to evaluate code intent and equivalence, somewhat similar to the code development process where consensus is important. The accreditation ensures that the organization uses a consistent process to perform the evaluations. This section is meant to reflect the current use of evaluation reports from accredited evaluation agencies or organizations.

104.2.3.6.2 Other reports. – this section is added to address reports generated by persons or agencies other than an approved agency. It

specifies that the person or agency providing the report must be qualified and must be approved by the code official. The code official has the authority to require the stamp of a registered design professional. When an applicant provides an evaluation from other than an accredited agency, or from a source that does not use publicly developed and available criteria, the code official needs more information in order to perform a proper review. Not only does the code official need to evaluate the product, but also evaluate the method that the applicant has used to determine compliance with code intent and code equivalence. So, in that case, it is proposed that the applicant would also have to provide the criteria that was used to do the evaluation, justification for use of that criteria, and data used for the evaluation, so a complete review can be made.

104.2.3.7 Peer review. – this section is added to address a method of review currently utilized by many jurisdictions. The peer review is an outside, third-party review that is submitted to the code official for use in cases where a jurisdiction may not have qualified resource in-house to perform a sufficient review of an alternative compliance proposal. Again, the peer reviewer must be qualified and approved by the code official.

~~104.2.4~~ ~~104.10~~ Modifications. – this section is relocated under the section of compliance. Minor edits occurred to provide consistent language throughout the codes.

104.2.4.1 ~~104.10.1~~ Flood hazard areas. – this section on flood hazard areas only appears in the IBC, IRC and IEBC. This section is relocated to follow the provisions for modifications.

104.3 ~~104.2~~ Applications and permits. – this section is relocated and revised to provide consistent wording.

~~104.3.1~~ ~~104.2.1~~ Determination of substantially improved or substantially damaged existing buildings and structures in flood hazard areas. – this section on flood hazard areas only appears in the IBC, IRC and IEBC. This section is relocated to follow the provisions for modifications.

104.4 ~~104.6~~ Right of entry. – This section is relocated and revised to provide consistent wording. The issue of right of entry is the same with all enforcement issues.

~~104.4.1~~ Warrant. – this section was not found in all codes, so it was added to the IBC to provide the ability to utilize a warrant. This function is allowed by the courts and currently utilized by jurisdictions.

104.5 Identification. – no change

104.6 ~~104.3~~ Notices and orders. – relocated and revised for consistent wording.

104.7 ~~Department~~ Official records. – This section revised to provide consistent wording and is reformatted by creating subsections. Each subsection addresses a different type of record that the is to be retained. This format clarifies that these records are required to be maintained.

~~104.7.1~~ Approvals.

~~104.7.2~~ Inspections.

~~104.7.3~~ Code alternatives and modifications.

~~104.7.4~~ Tests.

~~104.7.5~~ Fees.

104.8 Liability. – this section deals with protection from liability of the code official. The sections are revised to provide consistent wording throughout all I-Codes.

~~104.8.1~~ Legal defense. – this section deals with legal defense for the code official. The sections are revised to provide consistent wording throughout all I-Codes.

104.9 Approved materials and equipment. – no change

~~104.9.1 Used materials~~ Material and equipment reuse. – this section addresses the reuse of materials and equipment. The section is revised to provide consistent wording throughout the codes to say that the code official must approve any materials to be reused.

~~104.4 Inspections.~~ – this section is relocated to 104.2.2. Some of the language in this section is not relocated since those portions are already covered in Section 110.

104.10 ~~Modifications~~ – this section is relocated to 104.2.4 for formatting.

~~104.10.1 Flood hazard areas~~ – this section is relocated to 104.2.4.1 for formatting.

104.11 ~~Alternative materials, design and methods of construction and equipment.~~– this section is relocated to 104.2.3 for formatting.

~~104.11.1 Research reports.~~ – this section is relocated to 104.2.3.6 for formatting.

~~104.11.2 Tests.~~ – this section is relocated 104.2.2.4, 104.2.3.5 and 104.8.4 for formatting.

Additional unique changes are as follows:

1. Sections in IWUIC 105 are relocated to IWUIC 104, so Section 105 is deleted. This also occurs in the IgCC and IPMC.
2. The IZC has a completely different approach application and therefore, only the duplicated sections in the IZC are revised.
3. IWUIC 104.4 Subjects Not Regulated by this Code is relocated to Section 102.5 and IWUIC 104.5 Matters Not Provided For is relocated to Section 102.6 for consistency with IFC format. A minor change was made to the definition of “approved agency” which removes the repeat of the word that is to be defined, agency, and replaces it with organization. Another revision allows the agency to furnish product evaluation in addition to certification, since evaluation and certification are two different things. Evaluation is for materials and methods not addressed by the code, and certification is for materials and methods that are addressed by the code. It is intended that all I-Codes will be formatted in this fashion. There was not sufficient time to process these revisions through the PMG CAC, so only the codes under the review of the Fire CAC and Building CAC are submitted at this time. The revisions for the other codes will occur during Public Comment.

A strikeout/underline version of each code follows to identify specific revisions.

BCAC was established by the ICC Board of Directors in July 2011 to pursue opportunities to improve and enhance assigned International Codes or portions thereof. In 2020 and 2021 the BCAC has held several virtual meetings open to any interested party. In addition, there were numerous virtual Working Group meetings for the current code development cycle, which included members of the committee as well as interested parties. Related documents and reports are posted on the BCAC website at https://www.iccsafe.org/products-and-services/i-codes/code-development/cs/building-code-action-committee-bcac/.The FCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance assigned International Codes with regard to fire and life safety in new and existing buildings and facilities as well as the protection of life and property in wildland urban interface areas. In 2020 and 2021 the Fire-CAC held multiple virtual meetings that were open to any interested party. In addition, there were numerous virtual specific working group meetings that were also open to any interested parties, to develop, discuss and debate the proposed changes. Related documentation and reports are posted on the FCAC website at: https://www.iccsafe.org/products-and-services/i-codes/code-development/cs/fire-code-action-committee-fcac/.

The proposal in strikeout and underline text format can be viewed here:

https://www.cdpaccess.com/proposal/8550/25693/files/download/2955/

Cost Impact: The code change proposal will not increase or decrease the cost of construction
This proposal simply reformats the code sections and provides consistency across the codes.

Public Hearing Results

Committee Action **As Modified**

The complete approved proposal including all of the approved committee modifications can be viewed in cdpACCESS as the public comment ready version.

https://www.cdpaccess.com/proposal/8550/26737/preview/

Committee Modification: 2021 International Building Code

[A] 104.2 Determination of Compliance. The building official shall have the authority to determine compliance with this code, to render interpretations of this code and to adopt policies~~,~~ and procedures~~, rules and regulations~~ in order to clarify the application of this code's provisions. Such interpretations, policies~~,~~ and procedures~~, rules and regulations~~:

1. Shall be in compliance with the intent and purpose of this code.
2. Shall not have the effect of waiving requirements specifically provided for in this code.

[A] 104.2.1 Listed compliance. Where this code or a referenced standard requires equipment, materials, products or services to be listed and a listing standard is specified, the listing shall be based on the specified standard. Where a listing standard is not specified, the listing shall be based on an *approved* listing criteria. Listings shall be germane to the provision requiring the listing. Installation shall be in accordance with the listing and the manufacturer's instructions, and where required to verify compliance, the listing standard and manufacturer's instructions shall be made available to the building official.

~~**[A] 104.2.1 Listed compliance.** Determination of compliance for anything required by this code, or a reference standard, to be listed shall be based on a test standard or approved listing evaluation that is germane to the provision requiring the listing. Anything required by this code, or a reference standard, to be listed shall be installed in accordance with the listing and the manufacturer's instructions. Copies of the listing standard and manufacturer's instructions shall be made available to the building official upon request.~~

[A] 104.2.2.3 Content. The technical opinion and report shall analyze the~~safety~~ properties of the design, operation or use of the building or premises and the facilities and appurtenances situated thereon, to identify and propose necessary recommendations.

[A] 104.2.2.4 Tests. Where there is insufficient evidence of compliance with the provisions of this code, the building official is authorized to require tests as evidence of compliance. Test methods shall be as specified in this code or by other recognized test standards. In the absence of recognized test standards, the building official shall approve the testing procedures. Such tests shall be performed by a party acceptable to the building official.

[A] 104.2.3.2 Application and disposition. Where required, a ~~A~~ request to use an alternative material, design or method of construction shall be submitted in writing to the building official for approval. Where the alternative material, design or method of construction is not approved, the building official shall respond in writing, stating the reasons the alternative was not approved.

[A] 104.2.3.4 Equivalency criteria. An alternative material, design or method of construction shall, for the purpose intended, be not less than the equivalent of that prescribed in this code with respect to all of the following, as applicable:

1. Quality
2. Strength
3. Effectiveness
4. Durability
5. Safety, other than fire safety
6. Fire safety

~~**[A] 104.2.3.4.1 Fire safety equivalency.** Determination of safety equivalency, with respect to fire, shall be based on an analysis that includes applicable fire safety performance properties, such as but not limited to ignitability, flame spread, heat release rate, heat of combustion, smoke development, and fire resistance. Determination of safety equivalency, with respect to structural fire safety, shall also include a structural system analysis.~~

[A] 104.2.3.6 Reports. Supporting documentation, where necessary to assist in the approval of materials or assemblies not specifically provided for in this code, shall comply with Sections 104.2.3.6.1 and 104.2.3.6.2.

[A] 104.2.3.6.1 Evaluation reports. Evaluation reports shall be issued by an *approved agency* ~~accredited to evaluate or certify products~~ and use of the evaluation report shall require approval by thebuilding official for the installation. The alternate material, design or method of construction and product evaluated shall be within the scope of the building official's recognition ~~accreditation~~ of the *approved agency*. Criteria used for the evaluation shall be identified within the report and where required, provided to the building official. ~~, developed using a process that includes input from the public and made available for review by the public~~.

[A] 104.2.3.6.2 Other reports. Reports not complying with Section 104.2.3.6.1 shall describe criteria, including but not limited to any referenced testing or analysis, used to determine compliance with code intent and justify code equivalence, including but not limited to any referenced testing or analysis. The report shall be prepared by a qualified engineer, specialist, laboratory or specialty organization acceptable to the building official. The building official is authorized to require design submittals to be prepared by, and bear the stamp of, a registered design professional.

[A] 104.3 Applications and permits. The building official shall receive applications, review construction documents and issue permits ~~for the erection, and alteration, demolition and moving of buildings and structures~~, inspect the premises for which such permits have been issued and enforce compliance with the provisions of this code.

[A] 104.6 Notices and orders. The ~~building~~ code official shall issue necessary notices or orders to ensure compliance with this code. Notices of violations shall be in accordance with Section 114.

2021 International Existing Building Code

[A] 104.2 Determination of Compliance. The code official shall have the authority to determine compliance with this code, to render interpretations of this code and to adopt policies~~,~~ and procedures~~, rules and regulations~~ in order to clarify the application of this code's provisions. Such interpretations, policies~~,~~ and procedures~~, rules and regulations~~:

1. Shall be in compliance with the intent and purpose of this code.
2. Shall not have the effect of waiving requirements specifically provided for in this code.

[A] 104.2.1 Listed compliance. Where this code or a referenced standard requires equipment, materials, products or services to be listed and a listing standard is specified, the listing shall be based on the specified standard. Where a listing standard is not specified, the listing shall be based on an *approved* listing criteria. Listings shall be germane to the provision requiring the listing. Installation shall be in accordance with the listing and the manufacturer's instructions, and where required to verify compliance, the listing standard and manufacturer's instructions shall be made available to the code official.

~~**[A] 104.2.1 Listed compliance.** Determination of compliance for anything required by this code, or a reference standard, to be listed shall be based on a test standard or approved listing evaluation that is germane to the provision requiring the listing. Anything required by this code, or a reference standard, to be listed shall be installed in accordance with the listing and the manufacturer's instructions. Copies of the listing standard and manufacturer's instructions shall be made available to the code official upon request.~~

[A] 104.2.2.3 Content. The technical opinion and report shall analyze the ~~fire safety~~ properties of the design, operation or use of the building or premises and the facilities and appurtenances situated thereon, to identify and propose necessary recommendations.

[A] 104.2.3.2 Application and disposition. Where required, a ~~A~~ request to use an alternative material, design or method of construction shall be submitted in writing to the building official for approval. Where the alternative material, design or method of construction is not approved, the building official shall respond in writing, stating the reasons the alternative was not approved.**[A] 104.2.2.4 Tests.** Where there is insufficient evidence of compliance with the provisions of this code, the building official is authorized to require tests as evidence of compliance. Test methods shall be as specified in this code or by other recognized test standards. In the absence of recognized test standards, the building official shall approve the testing procedures. Such tests shall be performed by a party acceptable to the building official.

[A] 104.2.3.4 Equivalency criteria. An alternative material, design or method of construction shall, for the purpose intended, be not less than the equivalent of that prescribed in this code with respect to all of the following, as applicable:

1. Quality
2. Strength
3. Effectiveness
4. Durability

5. Safety, other than fire safety
6. Fire safety

[A] 104.2.3.4.1 Fire safety equivalency. Determination of safety equivalency, with respect to fire, shall be based on an analysis that includes applicable fire safety performance properties, such as but not limited to ignitability, flame spread, heat release rate, heat of combustion, smoke development, and fire resistance. Determination of safety equivalency, with respect to structural fire safety, shall also include a structural system analysis.

[A] 104.2.3.6 Reports. Supporting documentation, where necessary to assist in the approval of materials or assemblies not specifically provided for in this code, shall comply with Sections 104.2.3.6.1 and 104.2.3.6.2.

[A] 104.2.3.6.1 Evaluation reports. Evaluation reports shall be issued by an *approved agency* accredited to evaluate or certify products and use of the evaluation report shall require approval by the code official for the installation. The alternate material, design or method of construction and product evaluated shall be within the scope of the code official's recognition accreditation of the *approved agency*. Criteria used for the evaluation shall be identified within the report and where required, provided to the code official., developed using a process that includes input from the public and made available for review by the public.**[A] 104.2.3.6.2 Other reports.** Reports not complying with Section 104.2.3.6.1 shall describe criteria, including but not limited to any referenced testing or analysis, used to determine compliance with code intent and justify code equivalence. The report shall be prepared by a qualified engineer, specialist, laboratory or fire safety specialty organization acceptable to the fire code official. The code official is authorized to require design submittals to be prepared by, and bear the stamp of, a registered design professional.

[A] 104.3 Applications and permits. The code official is authorized to receive applications, review construction documents and issue permits for the repair and construction regulated by this code; inspect the premises for which such permits have been issued; and enforce compliance with the provisions of this code. **[A] 104.6 Notices and orders.** The code official shall issue necessary notices or orders to ensure is authorized to issue such notices or orders as are required to affectcompliance with this code. Notices of violations shall be in accordance with Section 113.

2021 International Fire Code

[A] 104.2 Determination of Compliance. The fire code official shall have the authority to determine compliance with this code, to render interpretations of this code and to adopt policies, and procedures, rules and regulations in order to clarify the application of this code's provisions. Such interpretations, policies, and procedures, rules and regulations:

1.	Shall be in compliance with the intent and purpose of this code.
2.	Shall not have the effect of waiving requirements specifically provided for in this code.

[A] 104.2.1 Listed compliance. Where this code or a referenced standard requires equipment, materials, products or services to be listed and a listing standard is specified, the listing shall be based on the specified standard. Where a listing standard is not specified, the listing shall be based on an *approved* listing criteria. Listings shall be germane to the provision requiring the listing. Installation shall be in accordance with the listing and the manufacturer's instructions, and where required to verify compliance, the listing standard and manufacturer's instructions shall be made available to the fire code official.

[A] 104.2.1 Listed compliance. Determination of compliance for anything required by this code, or a reference standard, to be listed shall be based on a test standard or approved listing evaluation that is germane to the provision requiring the listing. Anything required by this code, or a reference standard, to be listed shall be installed in accordance with the listing and the manufacturer's instructions. Copies of the listing standard and manufacturer's instructions shall be made available to the fire code official upon request.

[A] 104.2.2.3 Content. The technical opinion and report shall analyze thefire safety properties of the design, operation or use of the building or premises and the facilities and appurtenances situated thereon, to identify and propose necessary recommendations.

[A] 104.2.2.4 Tests. Where there is insufficient evidence of compliance with the provisions of this code, the fire code official is authorized to require tests as evidence of compliance. Test methods shall be as specified in this code or by other recognized test standards. In the absence of recognized test standards, the fire code official shall approve the testing procedures. Such tests shall be performed by a party acceptable to the fire code official.

[A] 104.2.3.2 Application and disposition. Where required, a ~~A~~ request to use an alternative material, design or method of construction shall be submitted in writing to the building official for approval. Where the alternative material, design or method of construction is not approved, the building official shall respond in writing, stating the reasons the alternative was not approved. **[A] 104.2.3.4 Equivalency criteria.** An alternative material, design or method of construction shall, for the purpose intended, be not less than the equivalent of that prescribed in this code with respect to all of the following, as applicable:

1. Quality
2. Strength
3. Effectiveness
4. Durability
5. Safety, other than fire safety
6. Fire safety

~~**[A] 104.2.3.4.1 Fire safety equivalency.** Determination of safety equivalency, with respect to fire, shall be based on an analysis that includes applicable fire safety performance properties, such as but not limited to ignitability, flame spread, heat release rate, heat of combustion, smoke development, and fire resistance. Determination of safety equivalency, with respect to structural fire safety, shall also include a structural system analysis.~~

[A] 104.2.3.6 Reports. Supporting documentation, where necessary to assist in the approval of materials or assemblies not specifically provided for in this code, shall comply with Sections 104.2.3.6.1 and 104.2.3.6.2.

[A] 104.2.3.6.1 Evaluation reports. Evaluation reports shall be issued by an *approved agency* ~~accredited to evaluate or certify products~~ and use of the evaluation report shall require approval by thefire code official for the installation. The alternate material, design or method of construction and product evaluated shall be within the scope of the fire code official's recognition ~~accreditation~~ of the *approved agency*. Criteria used for the evaluation shall be identified within the report and where required, provided to the fire code official. ~~, developed using a process that includes input from the public and made available for review by the public~~.

[A] 104.2.3.6.2 Other reports. Reports not complying with Section 104.2.3.6.1 shall describe criteria, including but not limited to any referenced testing or analysis, used to determine compliance with code intent and justify code equivalence. The report shall be prepared by a qualified engineer, specialist, laboratory or fire safety specialty organization acceptable to the fire code official. The fire code official is authorized to require design submittals to be prepared by, and bear the stamp of, a registered design professional.

[A] 104.6 Notices and orders. The ~~fire~~ code official i~~s authorized to issue such notices or orders as are required to affect~~shall issue necessary notices or orders to ensure compliance with this code. Notices of violations shall be in accordance with Section~~s~~ 112~~.1 and 112.2~~.

2021 International Property Maintenance Code

[A] 105.2 Determination of Compliance. The code official shall have the authority to determine compliance with this code, to render interpretations of this code and to adopt policies~~,~~ and procedures~~, rules and regulations~~ in order to clarify the application of this code's provisions. Such interpretations, policies~~,~~ and procedures~~, rules and regulations~~:

1.	Shall be in compliance with the intent and purpose of this code.
2.	Shall not have the effect of waiving requirements specifically provided for in this code.

[A] 105.2.1.3 Content. The technical opinion and report shall analyze the~~safety~~ properties of the design, operation or use of the building or premises and the facilities and appurtenances situated thereon, to identify and propose necessary recommendations.

[A] 105.2.2.2 Application and disposition. Where required, a~~A~~ request to use an alternative material, design or method of construction shall be submitted in writing to the building official for approval. Where the alternative material, design or method of construction is not approved, the building official shall respond in writing, stating the reasons the alternative was not approved.
[A] 105.2.2.4 Equivalency criteria. An alternative material, design or method of construction shall, for the purpose intended, be not less than the equivalent of that prescribed in this code with respect to all of the following, as applicable:

1. Quality
2. Strength
3. Effectiveness
4. Durability
5. Safety, other than fire safety
6. Fire safety

[A] 105.2.2.4.1 Fire safety equivalency. Determination of safety equivalency, with respect to fire, shall be based on an analysis that includes applicable fire safety performance properties, such as but not limited to ignitability, flame spread, heat release rate, heat of combustion, smoke development, and fire resistance. Determination of safety equivalency, with respect to structural fire safety, shall also include a structural system analysis.

[A] 105.2.2.5 Tests. Where there is insufficient evidence of compliance with the provisions of this code, the building official is authorized to require tests as evidence of compliance. Test methods shall be as specified in this code or by other recognized test standards. In the absence of recognized test standards, the building official shall approve the testing procedures. Such tests shall be performed by a party acceptable to the building official.

[A] 105.2.2.6 Reports. Supporting documentation, where necessary to assist in the approval of materials or assemblies not specifically provided for in this code, shall comply with Sections 104.2.3.6.1 and 104.2.3.6.2.

[A] 105.2.2.6.1 Evaluation reports. Evaluation reports shall be issued by an *approved agency* accredited to evaluate or certify products and use of the evaluation report shall require approval by the code official for the installation. The alternate material, design or method of construction and product evaluated shall be within the scope of the code official's recognition accreditation of the *approved agency*. Criteria used for the evaluation shall be identified within the report and where required, provided to the code official., developed using a process that includes input from the public and made available for review by the public.

[A] 105.2.2.6.2 Other reports. Reports not complying with Section 105.2.2.6.1 shall describe criteria, including but not limited to any referenced testing or analysis, used to determine compliance with code intent and justify code equivalence, including but not limited to any referenced testing or analysis. The report shall be prepared by a qualified engineer, specialist, laboratory or specialty organization acceptable to the code official. The code official is authorized to require design submittals to be prepared by, and bear the stamp of, a registered design professional.

[A] 105.2.2.6.2 Other reports. Reports not complying with Section 105.2.2.6.1 shall describe criteria, including but not limited to any referenced testing or analysis, used to determine compliance with code intent and justify code equivalence, including but not limited to any referenced testing or analysis. The report shall be prepared by a qualified engineer, specialist, laboratory or specialty organization acceptable to the code official. The code official is authorized to require design submittals to be prepared by, and bear the stamp of, a registered design professional.

[A] 105.3 Inspections. The code official shall have the authority to conduct inspections, or shall accept reports of inspection by approved agencies or individuals. Reports of such inspections shall be in writing and be certified by a responsible officer of such approved agency or by the responsible individual.

[A] 105.6 Notices and orders. The code official shall issue all necessary notices or orders to ensure compliance with this code. Notices of violations shall be in accordance with Section 111.4109.

[A] 105.7.2 Inspections. The code official shall have the authority to conduct inspections, or shall accept reports of inspection by approved agencies or individuals. Reports of such inspections shall be in writing and be certified by a responsible officer of such approved agency or by the responsible individual.

The building code official shall keep a record of each inspection made, including notices and orders issued, showing the findings and disposition of each.

2021 International Wildland-Urban Interface Code

[A] 104.2 Determination of Compliance. The code official shall have the authority to determine compliance with this code, to render interpretations of this code and to adopt policies, and procedures, rules and regulations in order to clarify the application of this code's provisions. Such interpretations, policies, and procedures, rules and regulations:

1.	Shall be in compliance with the intent and purpose of this code.
2.	Shall not have the effect of waiving requirements specifically provided for in this code.

[A] 104.2.1.3 Content. The technical opinion and report shall analyze the ~~fire safety~~properties of the design, operation or use of the building or premises, the facilities and appurtenances situated thereon and fuel management to identify and propose necessary recommendations.

[A] 104.2.2.2 Application and disposition. Where required, a ~~A~~ request to use an alternative material, design or method of construction shall be submitted in writing to the building official for approval. Where the alternative material, design or method of construction is not approved, the building official shall respond in writing, stating the reasons the alternative was not approved. **[A] 104.2.2.4 Equivalency criteria.** An alternative material, design or method of construction shall, for the purpose intended, be not less than the equivalent of that prescribed in this code with respect to all of the following, as applicable:

1. Quality
2. Strength
3. Effectiveness
4. Durability
5. Safety, other than fire safety
6. Fire safety

~~**[A] 104.2.2.4.1 Fire safety equivalency.** Determination of safety equivalency, with respect to fire, shall be based on an analysis that includes applicable fire safety performance properties, such as but not limited to ignitability, flame spread, heat release rate, heat of combustion, smoke development, and fire resistance. Determination of safety equivalency, with respect to structural fire safety, shall also include a structural system analysis.~~

[A] 104.2.2.5 Tests. Where there is insufficient evidence of compliance with the provisions of this code, the building official is authorized to require tests as evidence of compliance. Test methods shall be as specified in this code or by other recognized test standards. In the absence of recognized test standards, the building official shall approve the testing procedures. Such tests shall be performed by a party acceptable to the building official.

[A] 104.2.2.6 Reports. Supporting documentation, where necessary to assist in the approval of materials or assemblies not specifically provided for in this code, shall comply with Sections 104.2.3.6.1 and 104.2.3.6.2.

[A] 104.2.2.6.1 Evaluation reports. Evaluation reports shall be issued by an *approved agency* ~~accredited to evaluate or certify products~~ and use of the evaluation report shall require approval by the code official for the installation. The alternate material, design or method of construction and product evaluated shall be within the scope of the code official's recognition ~~accreditation~~ of the *approved agency*. Criteria used for the evaluation shall be identified within the report and where required, provided to the code official. ~~, developed using a process that includes input from the public and made available for review by the public~~.

[A] 104.2.2.6.2 Other reports. Reports not complying with Section 104.2.2.6.1 shall describe criteria, including but not limited to any referenced testing or analysis, used to determine compliance with code intent and justify code equivalence. The report shall be prepared by a qualified engineer, specialist, laboratory or fire safety specialty organization acceptable to the ~~fire~~ code official. The code official is authorized to require design submittals to be prepared by, and bear the stamp of, a registered design professional.

[A] 104.6 Notices and orders. The code official shall issue necessary notices or orders to ensure ~~is authorized to issue such notices or orders as are required to affect~~ compliance with this code. Notices of violations shall be in accordance with Section 110.2.

2021 International Green Construction Code

104.2 Determination of Compliance. The code official shall have the authority to determine compliance with this code, to render interpretations of this code and to adopt policies~~,~~ and procedures~~, rules and regulations~~ in order to clarify the application of this code's provisions. Such interpretations, policies~~,~~ and procedures~~, rules and regulations~~:

1.	Shall be in compliance with the intent and purpose of this code.
2.	Shall not have the effect of waiving requirements specifically provided for in this code.

104.2.1 Listed compliance. Where this code or a referenced standard requires equipment, materials, products or services to be listed and a listing standard is specified, the listing shall be based on the specified standard. Where a listing standard is not specified, the listing shall be based on an *approved* listing criteria. Listings shall be germane to the provision requiring the listing. Installation shall be in accordance with the listing and the manufacturer's instructions, and where required to verify compliance, the listing standard and manufacturer's instructions shall be made available to the code official.

~~**104.2.1 Listed compliance.** Determination of compliance for anything required by this code, or a reference standard, to be listed shall be based on a test standard or approved listing evaluation that is germane to the provision requiring the listing. Anything required by this code, or a reference standard, to be listed shall be installed in accordance with the listing and the manufacturer's instructions. Copies of the listing standard and manufacturer's instructions shall be made available to the authority having jurisdiction upon request.~~

104.2.5.2 Application and disposition. Where required, a ~~A~~ request to use an alternative material, design or method of construction shall be submitted in writing to the building official for approval. Where the alternative material, design or method of construction is not approved, the code official shall respond in writing, stating the reasons the alternative was not approved.

104.2.5.4 Equivalency criteria. An alternative material, design, innovative approach or method of construction shall, for the purpose intended, be not less than the equivalent of that prescribed in this code with respect to all of the following, as applicable:

1. Quality
2. Strength
3. Effectiveness
4. Durability
5. Safety, other than fire safety
6. Fire safety

~~**104.2.5.4.1 Fire safety equivalency.** Determination of safety equivalency, with respect to fire, shall be based on an analysis that includes applicable fire safety performance properties, such as but not limited to ignitability, flame spread, heat release rate, heat of combustion, smoke development, and fire resistance. Determination of safety equivalency, with respect to structural fire safety, shall also include a structural system analysis.~~

104.2.5.5 Tests. Tests conducted to demonstrate equivalency in support of an alternative material, design or method of construction application shall be of a scale that is sufficient to predict performance of the end use configuration. Such tests shall be performed by a party acceptable to the authority having jurisdiction.

104.2.5.6 Reports. Supporting documentation, where necessary to assist in the approval of materials or assemblies not specifically provided for in this code, shall comply with Sections 104.2.5.6.1 and 104.2.5.6.2.

104.2.5.6.1 Evaluation reports. Evaluation reports shall be issued by an *approved agency* ~~accredited to evaluate or certify products~~and use of the evaluation report shall require approval by the code official for the installation. The alternate material, design or method of construction and product evaluated shall be within the scope of the code official's recognition ~~accreditation~~ of the *approved agency*. Criteria used for the evaluation shall be identified within the report and where required, provided to the code official.~~, developed using a process that includes input from the public and made available for review by the public~~.

104.2.5.6.2 Other reports. Reports not complying with Section 104.2.5.6.1 shall describe criteria, including but not limited to any referenced testing or analysis, used to determine compliance with code intent and justify code equivalence, including but not limited to any referenced testing or analysis. The report shall be prepared by a qualified engineer, specialist, laboratory or specialty organization acceptable to the authority having jurisdiction. The authority having jurisdiction is authorized to require design submittals to be prepared by, and bear the stamp of, a registered design professional.

~~**104.4 Inspections.** The authority having jurisdiction shall have the authority to conduct inspections, as required, to determine code~~

~~compliance, or the authority having jurisdiction shall have the authority to accept reports of inspection by approved agencies or individuals.~~

104.7 Notices and orders. The ~~authority having jurisdiction~~ code official shall issue all necessary notices or orders to ensure compliance with this code.

104.8.2 Inspections. The ~~authority having jurisdiction~~ code official shall keep a record of each inspection made, including notices and orders issued, showing the findings and disposition of each.

Committee Reason: The committee stated that the reasons for the approval of the modifications by number were as follows:
2: Safety and fire safety should be identified separately as the modification does and it is significantly easier to read especially for the new o small jurisdiction code officials.

19: It clears up the notices section and the items that were identified which is an improvement to the code.

24: It clears up some of the different concerns with the proposal and provides clarity to the sections as noted.

37: It furthers the family of changes in clarifications by improving the language.

38: It creates consistency between the codes.

39: It addresses concerns originally with an agency accredited to certify products by cleaning that up because as was mentioned, an engineering firm may not be accredited by anybody but it is appropriate for them to do this work.

40: It provides clarification and coordination between all the codes.

41: It addresses another concern with the original proposal that requires that the documentation be provided, and the modification allows for field approval of small modifications or alternatives.

The committee stated multiple reasons for approval as well as opposition to the proposal. In support, it was noted that overall the proposal was an improvement to the existing section and specifically the first two paragraphs are better than what is now in the code. The organizing of that portion is worth it and taken together with all the approved modifications the section is better than the current section. In opposition, it was stated that with all the modifications taken together with the complexity of the entire proposal, it is more than can be thoroughly evaluated at this point. (Vote: 9-4)

Final Hearing Results

ADM13-22 Part I AM

ADM34-22 Part I

Original Proposal

IEBC: [A] 104.11, [A] 104.11.1; IFC: [A] 104.10, [A] 104.10.1; IFGC: [A] 105.2, [A] 105.2.1; IMC: [A] 105.2, [A] 105.2.1; IPC: [A] 105.2, [A] 105.2.1; IPMC: [A] 106.2, [A] 106.6; IPSDC: [A] 105.2, [A] 105.2.1; ISPSC: [A] 104.10, 104.10.1 (New); IWUIC: [A] 105.3, 105.3.1 (New); IGCC: 105.4, 105.4.1

Proponents: Mike Nugent, Chair, Building Code Action Committee (bcac@iccsafe.org); Robert Marshall, FCAC, FCAC (fcac@iccsafe.org)

THIS IS A 2 PART CODE CHANGE. PART I WILL BE HEARD BY THE ADMINISTRATIVE CODE COMMITTEE. PART II WILL BE HEARD BY THE IRC-BUILDING CODE COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THESE COMMITTEES.

2021 International Existing Building Code

Revise as follows:

[A] 104.11 Alternative materials, design and methods of construction, and equipment. The provisions of this code are not intended to prevent the installation of any material or to prohibit any design or method of construction not specifically prescribed by this code, provided that any such alternative has been *approved*. An alternative material, design or method of construction shall be *approved* where the *code official* finds that the proposed alternative meets all of the following:

1. The alternative material, design or method of construction is satisfactory and complies with the intent of the provisions of this code, ~~and that~~
2. The material, method or work offered is, for the purpose intended, not less than the equivalent of that prescribed in this code ~~in~~ as it pertains to the following:
   - 2.1. Quality,
   - 2.2. Strength,
   - 2.3. Effectiveness,
   - 2.4. Fire resistance,
   - 2.5. Durability, ~~and~~
   - 2.6 Safety.

Where the alternative material, design or method of construction is not *approved*, the *code official* shall respond in writing, stating the reasons why the alternative was not *approved*.

[A] 104.11.1 Research reports. Supporting data, where necessary to assist in the approval of materials or assemblies not specifically provided for in this code, shall consist of valid research reports from *approved* sources.

Reason: ADM19-19 modified IBC Section 104.11, but did not make the same suggestion across all the codes. The changes to this section were primarily formatting, with some slight reordering. This same change to be applicable to all the codes. It was also noted that not all of the codes included a subsection on research reports as an aid to alternative approval.
This proposal is submitted by the ICC Building Code Action Committee (BCAC), ICC Fire Code Action Committee (FCAC) and . ICC Plumbing/Mechanical/Gas Code Action Committee (PMGCAC).

BCAC was established by the ICC Board of Directors in July 2011 to pursue opportunities to improve and enhance assigned International Codes or portions thereof. In 2020 and 2021 the BCAC has held several virtual meetings open to any interested party. In addition, there were numerous virtual Working Group meetings for the current code development cycle, which included members of the committee as well as interested parties. Related documents and reports are posted on the BCAC website at https://www.iccsafe.org/products-and-services/i-codes/code-development/cs/building-code-action-committee-bcac/.

The FCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance assigned International Codes

with regard to fire and life safety in new and existing buildings and facilities as well as the protection of life and property in wildland urban interface areas. In 2020 and 2021 the Fire-CAC held multiple virtual meetings that were open to any interested party. In addition, there were numerous virtual specific working group meetings that were also open to any interested parties, to develop, discuss and debate the proposed changes. Related documentation and reports are posted on the FCAC website at: https://www.iccsafe.org/products-and-services/i-codes/code-development/cs/fire-code-action-committee-fcac/

The PMG CAC was established by the ICC Board of Directors in July 2011 to pursue opportunities to improve and enhance assigned International Codes or portions thereof. In 2020 and 2021, the PMGCAC has held several virtual meetings open to any interested party. Numerous interested parties attended the committee meetings and offered their input.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
This is primarily a format change.

Public Hearing Results

Committee Action **As Submitted**

Committee Reason: The committee stated that the reason for approval was that it is very similar to the previous changes made in Section 104.11 for alternate materials and it provides consistency in the codes. (Vote: 11-2)

Final Hearing Results

ADM34-22 Part I AS

ADM35-22

Original Proposal

IBC: [A] 104.11; IEBC: [A] 104.11; IFC: [A] 104.10; IFGC: [A] 105.2; IMC: [A] 105.2; IPC: [A] 105.2; IPSDC: [A] 105.2

Proponents: David Collins, The Preview Group, Inc, Self (dcollins@preview-group.com); Ronald Geren, RLGA Technical Services, LLC, The American Institute of Architects (ron@specsandcodes.com); Paul Karrer, The American Institute of Architects, The American Institute o Architects (paulkarrer@aia.org)

2021 International Existing Building Code

Revise as follows:

[A] 104.11 Alternative materials, design and methods of construction, and equipment. The provisions of this code are not intended to prevent the installation of any material or to prohibit any design or method of construction not specifically prescribed by this code, provided that any such alternative has been *approved*. An alternative material, design or method of construction shall be*approved* where the *code official* finds that the proposed design is satisfactory and complies with the intent of the provisions of this code, and that the material, method or work offered is, for the purpose intended, not less than the equivalent of that prescribed in this code in quality, strength, effectiveness, fire resistance, durability and safety. Where the alternative material, design or method of construction is not *approved*, the *code official* shall respond in writing, stating the reasons why the alternative was not*approved*.

Exception: Performance-based alternative materials, designs or methods of construction complying with the*ICC Performance Code*

Reason: The ICC Performance Code (ICCPC) should not be considered solely for whole building designs, but also as another pathway for evaluating alternative materials, designs, and methods of construction. When projects are designed per the prescriptive requirements of any ICC code, there are situations where a single material, element, or system cannot conform to the prescriptive requirements. Also, new materials, elements, or systems are entering the construction market at a pace that the prescriptive codes cannot keep up. This provision will allow owners, designers and building officials to consider such advances in such materials, elements of designs using the Performance Code for guidance.

Although the prescriptive provisions in each of the codes provides one pathway for approval of alternative materials, designs, and methods of construction, the ICCPC should not be overlooked as an alternative pathway. The ICCPC may be considered by the building official as an alternative method in and of itself per any of the sections listed, by including it within the text of each section will draw much greater attention to the ICCPC and thereby increase its use and adoption.

Cost Impact: The code change proposal will not increase or decrease the cost of construction

This change to the above mentioned codes do not add a requirement that individual projects must comply with. It provides an additional option for those projects that wish to pursue more performance-based solutions. ICC's Cost Impact Guide cites code change proposals that modify the design requirements (e.g. greater number of design options, design process efficiencies) as recognized instance of proposals that do not affect the construction or construction cost. Providing projects a route to use the ICC Performance Code to evaluate materials, designs and methods of construction does not impact the cost of construction.

Public Hearing Results

Committee Action **As Modified**

Committee Modification:

2021 International Building Code

[A]104.11 Alternative materials, design and methods of construction and equipment. The provisions of this code are not intended to

prevent the installation of any material or to prohibit any design or method of construction not specifically prescribed by this code, provided that any such alternative has been *approved*. An alternative material, design or method of construction shall be *approved* where the *building official* finds that the proposed alternative meets all of the following:

1. The alternative material, design or method of construction is satisfactory and complies with the intent of the provisions of this code,
2. The material, method or work offered is, for the purpose intended, not less than the equivalent of that prescribed in this code as it pertains to the following:
   2.1. Quality.
   2.2. Strength.
   2.3. Effectiveness.
   2.4. *Fire resistance*.
   2.5. Durability.
   2.6. Safety.

Where the alternative material, design or method of construction is not approved, the *building official* shall respond in writing, stating the reasons why the alternative was not approved.

Exception: Performance-based alternative materials, designs or methods of construction and equipment complying with the *ICC Performance Code*.This exception shall not apply to alternative structural materials or to alternative structural designs.

2021 International Existing Building Code

[A]104.11 Alternative materials, design and methods of construction, and equipment. The provisions of this code are not intended to prevent the installation of any material or to prohibit any design or method of construction not specifically prescribed by this code, provided that any such alternative has been *approved*. An alternative material, design or method of construction shall be *approved* where the *code official* finds that the proposed design is satisfactory and complies with the intent of the provisions of this code, and that the material, method or work offered is, for the purpose intended, not less than the equivalent of that prescribed in this code in quality, strength, effectiveness, fire resistance, durability and safety. Where the alternative material, design or method of construction is not *approved*, the *code official* shall respond in writing, stating the reasons why the alternative was not *approved*.

Exception: Performance-based alternative materials, designs or methods of construction and equipment complying with the *ICC Performance Code*. This exception shall not apply to alternative structural materials or to alternative structural designs.

Committee Reason: The committee stated that the reason for the approval of the modification was that since the exception is referring to the performance code and if the performance code is not ready for structural type situations you need to have this exception in there to make sure that somebody doesn't try to use it for that purpose. The stated reasons for the approval were that this is another tool in the toolbox and owners can take advantage of this requirement and it brings more attention to it and this path especially with the modification. It was additionally stated that this proposal and the modification are critical as it brings another type of alternative that is performance based. (Vote: 7-6)

Final Hearing Results

ADM35-22 AM

ADM36-22 Part I

Original Proposal

IBC: [A] 104.11, [A] 104.11.1 (New), [A] 104.11.2 (New), [A] 104.11.1, [A] 104.11.2; IEBC: [A] 104.11, [A] 104.11.1 (New), [A] 104.11.2 (New), [A] 104.11.1, [A] 104.11.2; IFC: [A] 104.10, [A] 104.10.1 (New), [A] 104.10.2 (New), [A] 104.10.1, [A] 104.10.2; IFGC: [A] 105.2, [A] 105.2.1 (New), [A] 105.2.2 (New), [A] 105.2.1; IMC: [A] 105.2, [A] 105.2.1 (New), [A] 105.2.2 (New), [A] 105.2.1; IPC: [A] 105.2, [A] 105.2.1 (New), [A] 105.2.2 (New), [A] 105.2.1; IPMC: [A] 106.2, [A] 106.2.1 (New), [A] 106.2.2 (New); IWUIC: [A] 105.3, [A] 105.3.1 (New), [A] 105.3.2 (New)

Proponents: Marcelo Hirschler, GBH International, GBH International (mmh@gbhint.com)

THIS IS A 2 PART CODE CHANGE. PART I WILL BE HEARD BY THE ADMINISTRATIVE CODE COMMITTEE. PART II WILL BE HEARD BY THE IRC-BUILDING CODE COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THESE COMMITTEES.

2021 International Existing Building Code

Revise as follows:

[A] 104.11 Alternative materials, design and methods of construction, and equipment. The provisions of this code are not intended to prevent the installation of any material or to prohibit any design or method of construction not specifically prescribed by this code, provided that any such alternative has been *approved*. An alternative material, design or method of construction shall be *approved* where the *code official* finds that the proposed design is satisfactory and complies with the intent of the provisions of this code, and that the material, method or work offered is, for the purpose intended, not less than the equivalent of that prescribed in this code in quality, strength, effectiveness, ~~fire resistance,~~ durability and safety. Where the alternative material, design or method of construction is not *approved*, the *code official* shall respond in writing, stating the reasons why the alternative was not *approved*.

Add new text as follows:

[A] 104.11.1 Fire safety equivalency.. Determination of safety equivalency, with respect to fire, shall be based on an analysis that includes applicable fire safety performance properties, such as but not limited to ignitability, flame spread, heat release rate, heat of combustion, smoke development, and fire resistance. Determination of safety equivalency, with respect to structural fire safety, shall also include a structural system analysis.

[A] 104.11.2 Fire Tests.. Tests conducted to demonstrate equivalent fire safety in support of an alternative material, design or method of construction application shall be of a scale that is sufficient to predict fire safety performance of the end use configuration. Tests shall be performed by a party acceptable to the code official.

Revise as follows:

[A] ~~104.11.1~~ 104.11.3 Research reports. Supporting data, where necessary to assist in the approval of materials or assemblies not specifically provided for in this code, shall consist of valid research reports from *approved* sources.

[A] ~~104.11.2~~ 104.11.4 Tests. Where there is insufficient evidence of compliance with the provisions of this code or evidence that a material or method does not conform to the requirements of this code, or in order to substantiate claims for alternative materials or methods, the *code official* shall have the authority to require tests as evidence of compliance to be made without expense to the jurisdiction. Test methods shall be as specified in this code or by other recognized test standards. In the absence of recognized and accepted test methods, the *code official* shall approve the testing procedures. Tests shall be performed by an *approved* agency. Reports of such tests shall be retained by the *code official* for the period required for retention.

Reason: The intent of this code proposal is to clarify equivalency in terms of fire safety, which is incorrect and misleading as described simply in terms of fire resistance at present. In fact, fire resistance is only a subset of all aspects of fire safety. Therefore, it is better to

have a safety analysis look at the issue of fire safety more comprehensively.
As revised, fire resistance would be deleted from the list, and a separate section added that more fully addresses fire safety. A proper fire safety analysis performed under this section should always have taken these considerations into account, but having them specifically stated, and removing the incorrect term “fire resistance” item from the list will help code officials and code users by providing more thorough guidance for preparation of alternative method proposals. Additional guidance has also been provided to ensure that fire testing done in support of an alternative method proposal is of a sufficient scale to be relevant to the end use application.

This proposal is a portion of a more wide-ranging proposal that revises the entire section 104. The language relating to the fire safety aspects is identical to that agreed to for that proposal.

Equivalent changes are being proposed to all 9 ICC codes for which fire safety is a relevant issue in terms of alternate materials and methods.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
There is no cost impact since this code proposal only clarifies the intent of the section and provides clearer guidance to the building, fire or code official.

Public Hearing Results

Committee Action **As Modified**

Committee Modification:
2021 International Building Code

[A]104.11 Alternative materials, design and methods of construction and equipment. The provisions of this code are not intended to prevent the installation of any material or to prohibit any design or method of construction not specifically prescribed by this code, provided that any such alternative has been *approved*. An alternative material, design or method of construction shall be *approved* where the *building official* finds that the proposed alternative meets all of the following:

1. The alternative material, design or method of construction is satisfactory and complies with the intent of the provisions of this code,
2. The material, method or work offered is, for the purpose intended, not less than the equivalent of that prescribed in this code as it pertains to the following:
   2.1. Quality.
   2.2. Strength.
   2.3. Effectiveness.
   2.4. Durability.
   2.5. Safety, other than fire safety
   2.6 Fire Safety

Where the alternative material, design or method of construction is not approved, the *building official* shall respond in writing, stating the reasons why the alternative was not approved.

~~**[A] 104.11.1 Fire safety equivalency.** Determination of safety equivalency, with respect to fire, shall be based on an analysis that includes applicable fire safety performance properties, such as but not limited to ignitability, flame spread, heat release rate, heat of combustion, smoke development, and fire resistance. Determination of safety equivalency, with respect to structural fire safety, shall also include a structural system analysis.~~

2021 International Existing Building Code

[A] 104.11 Alternative materials, design and methods of construction, and equipment. The provisions of this code are not intended to prevent the installation of any material or to prohibit any design or method of construction not specifically prescribed by this code, provided

that any such alternative has been *approved*. An alternative material, design or method of construction shall be *approved* where the *code official* finds that the proposed design is satisfactory and complies with the intent of the provisions of this code, and that the material, method or work offered is, for the purpose intended, not less than the equivalent of that prescribed in this code in quality, strength, effectiveness, durability, fire safety, and safety. Where the alternative material, design or method of construction is not *approved*, the *code official* shall respond in writing, stating the reasons why the alternative was not *approved*.

~~**[A] 104.11.1Fire safety equivalency.** Determination of safety equivalency, with respect to fire, shall be based on an analysis that includes applicable fire safety performance properties, such as but not limited to ignitability, flame spread, heat release rate, heat of combustion, smoke development, and fire resistance. Determination of safety equivalency, with respect to structural fire safety, shall also include a structural system analysis.~~

2021 International Fire Code

[A] 104.10 Alternative materials, design and methods of construction and equipment. The provisions of this code are not intended to prevent the installation of any material or to prohibit any design or method of construction not specifically prescribed by this code, provided that any such alternative has been *approved*. An alternative material, design or method of construction shall be *approved* where the *fire code official* finds that the proposed design is satisfactory and complies with the intent of the provisions of this code, and that the material, method or work offered is, for the purpose intended, not less than the equivalent of that prescribed in this code in quality, strength, effectiveness, durability, fire safety, and safety. Where the alternative material, design or method of construction is not *approved*, the *fire code official* shall respond in writing, stating the reasons why the alternative was not *approved*.

~~**[A] 104.10.1 Fire safety equivalency.** Determination of safety equivalency, with respect to fire, shall be based on an analysis that includes applicable fire safety performance properties, such as but not limited to ignitability, flame spread, heat release rate, heat of combustion, smoke development, and fire resistance. Determination of safety equivalency, with respect to structural fire safety, shall also include a structural system analysis.~~

2021 International Fuel Gas Code

[A] 105.2 Alternative materials, design and methods of construction and equipment. The provisions of this code are not intended to prevent the installation of any material or to prohibit any design or method of construction not specifically prescribed by this code, provided that any such alternative has been *approved*. An alternative material, design or method of construction shall be *approved* where the *code official* finds that the proposed design is satisfactory and complies with the intent of the provisions of this code, and that the material, method or work offered is, for the purpose intended, not less than the equivalent of that prescribed in this code in quality, strength, effectiveness, durability, fire safety, and safety. Where the alternative material, design or method of construction is not *approved*, the *code official* shall respond in writing, stating the reasons why the alternative was not *approved*.

~~**[A] 105.2.1 Fire safety equivalency.** Determination of safety equivalency, with respect to fire, shall be based on an analysis that includes applicable fire safety performance properties, such as but not limited to ignitability, flame spread, heat release rate, heat of combustion, smoke development, and fire resistance. Determination of safety equivalency, with respect to structural fire safety, shall also include a structural system analysis.~~

2021 International Mechanical Code

[A] 105.2 Alternative materials, design and methods of construction and equipment. The provisions of this code are not intended to prevent the installation of any material or to prohibit any design or method of construction not specifically prescribed by this code, provided that any such alternative has been *approved*. An alternative material, design or method of construction shall be *approved* where the code official finds that the proposed design is satisfactory and complies with the intent of the provisions of this code, and that the material, method or work offered is, for the purpose intended, not less than the equivalent of that prescribed in this code in quality, strength, effectiveness, durability, fire safety, and safety. Where the alternative material, design or method of construction is not *approved*, the *code*

official shall respond in writing, stating the reasons why the alternative was not*approved*.

~~**[A] 105.2.1 Fire safety equivalency.** Determination of safety equivalency, with respect to fire, shall be based on an analysis that includes applicable fire safety performance properties, such as but not limited to ignitability, flame spread, heat release rate, heat of combustion, smoke development, and fire resistance. Determination of safety equivalency, with respect to structural fire safety, shall also include a structural system analysis.~~

2021 International Plumbing Code

[A] 105.2 Alternative materials, design and methods of construction and equipment. The provisions of this code are not intended to prevent the installation of any material or to prohibit any design or method of construction not specifically prescribed by this code, provided that any such alternative has been *approved*. An alternative material or method of construction shall be *approved* where the code official finds that the proposed design is satisfactory and complies with the intent of the provisions of this code, and that the material, method or work offered is, for the purpose intended, not less than the equivalent of that prescribed in this code in quality, strength, effectiveness, durability, fire safety, and safety. Where the alternative material, design or method of construction is not*approved*, the code official shall respond in writing, stating the reasons why the alternative was not *approved*.

~~**[A] 105.2.1 Fire safety equivalency.** Determination of safety equivalency, with respect to fire, shall be based on an analysis that includes applicable fire safety performance properties, such as but not limited to ignitability, flame spread, heat release rate, heat of combustion, smoke development, and fire resistance. Determination of safety equivalency, with respect to structural fire safety, shall also include a structural system analysis.~~

2021 International Property Maintenance Code

[A] 106.2 Alternative materials, design and methods of construction and equipment. The provisions of this code are not intended to prevent the installation of any material or to prohibit any design or method of construction not specifically prescribed by this code, provided that any such alternative has been *approved*. An alternative material, design or method of construction shall be *approved* where the *code official* finds that the proposed design is satisfactory and complies with the intent of the provisions of this code, and that the material, method or work offered is, for the purpose intended, not less than the equivalent of that prescribed in this code in quality, strength, effectiveness, durability, fire safety, and safety. Where the alternative material, design or method of construction is not*approved*, the *code official* shall respond in writing, stating the reasons why the alternative was not*approved*.

~~**[A] 106.2.1 Fire safety equivalency.** Determination of safety equivalency, with respect to fire, shall be based on an analysis that includes applicable fire safety performance properties, such as but not limited to ignitability, flame spread, heat release rate, heat of combustion, smoke development, and fire resistance. Determination of safety equivalency, with respect to structural fire safety, shall also include a structural system analysis.~~

2021 International Wildland-Urban Interface Code

[A] 105.3 Alternative materials, design and methods. The provisions of this code are not intended to prevent the installation of any material or to prohibit any design or method not specifically prescribed by this code, provided that any such alternative has been *approved*. An alternative material, design or method shall be *approved* where the *building official* in concurrence with the fire chief finds that the proposed design is satisfactory and complies with the intent of the provisions of this code, and that the material, method or work offered is, for the purpose intended, not less than the equivalent of that prescribed in this code in quality, strength, effectiveness, durability, fire safety, and safety. Where the alternative material, design or method is not*approved*, the *building official* shall respond in writing, stating the reasons why the alternative was not *approved*.

~~**[A] 105.3.1 Fire safety equivalency.** Determination of safety equivalency, with respect to fire, shall be based on an analysis that includes applicable fire safety performance properties, such as but not limited to ignitability, flame spread, heat release rate, heat of combustion,~~

~~smoke development, and fire resistance. Determination of safety equivalency, with respect to structural fire safety, shall also include a structural system analysis.~~

Committee Reason: The committee stated that the reason for the approval of the modification was that proposed fire safety equivalency section is not needed in the code. The stated reason for the approval of the proposal is that it correlates with the other code changes that were previously approved. (Vote: 13-0)

Final Hearing Results

ADM36-22 Part I AM

ADM41-22 Part I

Original Proposal

IBC: SECTION 108, [A] 108.1, [A] 108.2, [A] 108.3, [A] 108.4, SECTION 112, [A] 112.1, [A] 112.2, [A] 112.3; IEBC: SECTION 107, [A] 107.1 , [A] 107.2, [A] 107.3, [A] 107.4, SECTION 111, [A] 111.1, [A] 111.2, [A] 111.3; IFC: SECTION 106 (New), 106.1 (New), 106.2 (New), 106.3 (New), 106.4 (New), SECTION 110, [A] 110.1; IFGC: SECTION 110, [A] 110.1, [A] 110.2, 110.3, SECTION 111, [A] 111.1, [A] 111.2, [A] 111.3, [A] 111.4; IMC: SECTION 107, [A] 107.1, [A] 107.2, [A] 107.3, [A] 107.4, SECTION 112, [A] 112.1, [A] 112.2, [A] 112.3; IPC: SECTION 107, [A] 107.1, [A] 107.2, [A] 107.3, [A] 107.4, SECTION 112, [A] 112.1, [A] 112.2, [A] 112.3; IPSDC: SECTION 109, [A] 109.1, [A] 109.2, [A] 109.3, [A] 109.4, SECTION 110, [A] 110.1, [A] 110.2, [A] 110.3; ISPSC: SECTION 106 (New), 106.1 (New), 106.2 (New), 106.3 (New), 106.4 (New), SECTION 109, [A] 109.1, [A] 109.2, [A] 109.3; IWUIC: SECTION 108, [A] 108.1, [A] 108.2, 108.3 (New), [A] 108.3, SECTION 112, [A] 112.1, [A] 112.2, [A] 112.3

Proponents: Mike Nugent, Chair, Building Code Action Committee (bcac@iccsafe.org); Joseph J. Summers, Chair of PMGCAC (pmgcac@iccsafe.org); Robert Marshall, FCAC, FCAC (fcac@iccsafe.org)

THIS IS A 2 PART CODE CHANGE. PART I WILL BE HEARD BY THE ADMINISTRATIVE CODE COMMITTEE. PART II WILL BE HEARD BY THE IRC-BUILDING CODE COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THESE COMMITTEES.

2021 International Existing Building Code

Revise as follows:

SECTION 107
TEMPORARY ~~STRUCTURES AND~~ USES, EQUIPMENT AND SYSTEMS

[A] 107.1 General. The *code official* is authorized to issue a permit for temporary uses, equipment and systems. Such permits shall be limited as to time of service but shall not be permitted for more than 180 days. The *code official* is authorized to grant extensions for demonstrated cause.

[A] 107.2 Conformance. Temporary uses shall conform to the ~~structural strength, fire safety, means of egress, accessibility, light, ventilation and sanitary~~ requirements of this code as necessary to ensure ~~the public~~ health, safety and general welfare.

[A] 107.3 Temporary ~~power~~ service utilities. The *code official* is authorized to give permission to temporarily supply service utilities in accordance with Section 111. ~~and use power in part of an electric installation before such installation has been fully completed and the final certificate of completion has been issued. The part covered by the temporary certificate shall comply with the requirements specified for temporary lighting, heat or power in NFPA 70.~~

[A] 107.4 Termination of approval. The *code official* is authorized to terminate such permit for a temporary use and to order the ~~temporary use~~ same to be discontinued.

SECTION 111
SERVICE UTILITIES

[A] 111.1 Connection of service utilities. A person shall not make connections from a utility, source of energy, fuel, power, water system or sewer system to any building or system that is regulated by this code for which a permit is required, until *approved* by the *code official*.

[A] 111.2 Temporary connection. The *code official* shall have the authority to authorize the temporary connection of the building or system to the utility, source of energy, fuel, power, water system or sewer system for the purpose of testing systems or for use under a temporary approval.

[A] 111.3 Authority to disconnect service utilities. The *code official* shall have the authority to authorize disconnection of utility service to the building, structure or system regulated by this code and the referenced codes and standards in case of emergency where necessary to eliminate an immediate hazard to life or property or where such utility connection has been made without the approval required by Section 111.1 or 111.2. The *code official* shall notify the serving utility and, wherever possible, the owner or the owner's authorized agent and the occupant of the building, structure or service system of the decision to disconnect prior to taking such action. If not notified prior to disconnecting, the owner, the owner's authorized agent or occupant of the building, structure or service system shall be notified in writing, as soon as practical thereafter.

Reason: The purpose of this proposal is coordination between codes for the section on temporary structures. A version was proposed last cycle, ADM32-19. As requested by the development committee, the BCAC worked with FCAC and PMGCAC to develop this proposal. This proposal modified the section for temporary facilities where it was already in the code. The committee felt that it was very important to add these safety options to the IFC as well, so this proposal adds this section to IFC and ISPSC. When looking for coordination, some of the codes did not include 'structure' and some did. The residential committee felt it was important to keep 'structures', so that is remaining in the proposed text.

Generally - The word use is moved to the front, and the lists are made the same throughout.

Temporary power - The allowances for temporary connection under inspection and testing address more than just utilities, so the language in this section should match. The phrase "certificate of completion" is not defined, so "approved" would be a better choice.

The section on Conformance includes a laundry list " structural strength, fire safety, means of egress, accessibility, light, ventilation and sanitary", that is not needed for the section and includes provisions that are not addressed in all of the codes (e.g. IPC does not address structural strength, means of egress, or light).

The BCAC is working from the philosophy that ICC is a family of codes, so administrative requirements should be consistent across books. Most administrative and enforcement matters are the same for any code. Those matters unique for a specific code remain unchanged. This is one of a series of proposals being submitted relating to technical, editorial and organizational changes proposed for the Administrative chapters (Chapter 1) in all of the I-Codes.

This proposal is submitted by the ICC Building Code Action Committee (BCAC), ICC Fire Code Action Committee (FCAC) and . ICC Plumbing/Mechanical/Gas Code Action Committee (PMGCAC).

BCAC was established by the ICC Board of Directors in July 2011 to pursue opportunities to improve and enhance assigned International Codes or portions thereof. In 2020 and 2021 the BCAC has held several virtual meetings open to any interested party. In addition, there were numerous virtual Working Group meetings for the current code development cycle, which included members of the committee as well as interested parties. Related documents and reports are posted on the BCAC website at https://www.iccsafe.org/products-and-services/i-codes/code-development/cs/building-code-action-committee-bcac/.

The FCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance assigned International Codes with regard to fire and life safety in new and existing buildings and facilities as well as the protection of life and property in wildland urban interface areas. In 2020 and 2021 the Fire-CAC held multiple virtual meetings that were open to any interested party. In addition, there were numerous virtual specific working group meetings that were also open to any interested parties, to develop, discuss and debate the proposed changes. Related documentation and reports are posted on the FCAC website at: https://www.iccsafe.org/products-and-services/i-codes/code-development/cs/fire-code-action-committee-fcac/

The PMG CAC was established by the ICC Board of Directors in July 2011 to pursue opportunities to improve and enhance assigned International Codes or portions thereof. In 2020 and 2021, the PMGCAC has held several virtual meetings open to any interested party. Numerous interested parties attended the committee meetings and offered their input.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
This change is only removing repeating requirements, therefore this revision is strictly editorial and will not have any changes to the construction requirements.

Public Hearing Results

Committee Action **As Submitted**

Committee Reason: The committee stated that the reason for the approval was that it coordinates the requirements for temporary structures across the codes using the same language while making it appropriate for each code. (Vote: 13-0)

Final Hearing Results

ADM41-22 Part I	AS

ADM43-22 Part I

Original Proposal

IBC: [A] 109.3; IEBC: [A] 108.3; IFC: 107.3; IFGC: 109.3; IMC: [A] 109.3; ISPSC: [A] 108.3; IWUIC: [A] 109.3; IGCC: 108.3

Proponents: Mike Nugent, Chair, Building Code Action Committee (bcac@iccsafe.org); Joseph J. Summers, Plumbing, Mechanical and Fuel Gas Code Action Committee (pmgcac@iccsafe.org); Robert Marshall, FCAC, FCAC (fcac@iccsafe.org)

THIS IS A 2 PART CODE CHANGE. PART I WILL BE HEARD BY THE ADMINISTRATIVE CODE COMMITTEE. PART II WILL BE HEARD BY THE IRC-BUILDING CODE COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THESE COMMITTEES.

2021 International Existing Building Code

Revise as follows:

[A] 108.3 Permit valuations. The applicant for a *permit* shall provide an estimated ~~*permit*~~value <u>of the work for which the permit is being issued</u> at time of application. ~~*Permit* valuations shall reflect~~ <u>Such estimated valuations shall include</u> the total value of work, including materials and labor, for which the *permit* is being issued, such as electrical, gas, mechanical, plumbing equipment and permanent systems. ~~If~~ <u>Where</u>, in the opinion of the *code official*, the valuation is underestimated ~~on the application~~, the permit shall be denied unless the applicant can show detailed estimates ~~to meet the approval of~~ <u>acceptable to</u> the *code official*. ~~Final building permit valuation shall be set by the *code official*.~~ <u>The code official shall have the authority to adjust the final valuation for permit fees</u>.

Reason: The intent of this proposal is to coordinate the provisions for fees in the I-codes. Last cycle there were two different proposals to address consistency in the Fees section (ADM 27-19 and ADM 33-19) – the end result was coordination between the 2021 codes. for – IBC, IFC, IEBC, IMC, IPC, IPMC, IFGC, ISPSC, IWUIC and IZC.
The revisions to Section 109.3 is based on some concerns raised during discussion. The change to the first and second sentence is a clarification of application. The cost of the permit is the value of the work being performed, not the value of the permit. The current last sentence could be read to say the code official can arbitrarily set the permit valuation, or it could be read to say the code official had to calculate the valuation. The proposed language allows for the code official to make adjustments if warranted.

There is another code change to add this section to IPC. ADM27-19 was approved last cycle for the coordination of the Fees section in IMC, IPC, IPMC, IFGC, IPSPC. This section was left out of IPC by accident. This revised text has been submitted to be added to the IPC Section 109.3.

The BCAC is working from the philosophy that ICC is a family of codes, so administrative requirements should be consistent across books. Most administrative and enforcement matters are the same for any code. Those matters unique for a specific code remain unchanged. This is one of a series of proposals being submitted relating to technical, editorial and organizational changes proposed for the Administrative chapters (Chapter 1) in all of the I-Codes.

This proposal is submitted by the ICC Building Code Action Committee (BCAC), ICC Fire Code Action Committee (FCAC) and . ICC Plumbing/Mechanical/Gas Code Action Committee (PMGCAC).

BCAC was established by the ICC Board of Directors in July 2011 to pursue opportunities to improve and enhance assigned International Codes or portions thereof. In 2020 and 2021 the BCAC has held several virtual meetings open to any interested party. In addition, there were numerous virtual Working Group meetings for the current code development cycle, which included members of the committee as well as interested parties. Related documents and reports are posted on the BCAC website at https://www.iccsafe.org/products-and-services/i-codes/code-development/cs/building-code-action-committee-bcac/.

The FCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance assigned International Codes with regard to fire and life safety in new and existing buildings and facilities as well as the protection of life and property in wildland urban interface areas. In 2020 and 2021 the Fire-CAC held multiple virtual meetings that were open to any interested party. In addition, there were numerous virtual specific working group meetings that were also open to any interested parties, to develop, discuss and debate the proposed changes. Related documentation and reports are posted on the FCAC website at: https://www.iccsafe.org/products-and-services/i-codes/code-development/cs/fire-code-action-committee-fcac/.

The PMG CAC was established by the ICC Board of Directors in July 2011 to pursue opportunities to improve and enhance assigned International Codes or portions thereof. In 2020 and 2021, the PMGCAC has held several virtual meetings open to any interested party. Numerous interested parties attended the committee meetings and offered their input.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
This is an editorial change that provides consistency between I-codes.

Public Hearing Results

Committee Action **As Submitted**

Committee Reason: The committee stated that the reason for the approval was that the permit valuation needs to be in the hands of the building, code or fire code official and this change clarifies it by making it consistent across the other codes in a plain language correction. (Vote: 12-1)

Final Hearing Results

ADM43-22 Part I AS

ADM48-22 Part I

Original Proposal

IBC: SECTION 113, [A] 113.1, [A] 113.2, [A] 113.3, [A] 113.4; IEBC: SECTION 112, [A] 112.1, [A] 112.2, [A] 112.3, [A] 112.4; IFC: SECTION 111, [A] 111.1, [A] 111.2, [A] 111.3, [A] 111.4; IFGC: SECTION 113, 113.1, [A] 113.2, 113.3, 113.4; IMC: SECTION 114, [A] 114.1, [A] 114.2, [A] 114.3, [A] 114.4; IPC: SECTION 114, [A] 114.1, [A] 114.2, [A] 114.3, [A] 114.4; IPMC: SECTION 107, 107.1, [A] 107.2 , 107.3, 107.4; IPSDC: SECTION 112, [A] 112.1, 112.2, [A] 112.3, [A] 112.4; ISPSC: SECTION 111, [A] 111.1, [A] 111.2, [A] 111.3, [A] 111.4; IWUIC: SECTION 113, [A] 113.1, [A] 113.2, [A] 113.3, [A] 113.4; IGCC: SECTION 111, 111.1, 111.2, 111.3, 111.4

Proponents: Mike Nugent, Chair, Building Code Action Committee (bcac@iccsafe.org); Joseph J. Summers, Plumbing, Mechanical and Fuel Gas Code Action Committee (pmgcac@iccsafe.org); Robert Marshall, FCAC, FCAC (fcac@iccsafe.org)

THIS IS A 2 PART CODE CHANGE. PART I WILL BE HEARD BY THE ADMINISTRATIVE CODE COMMITTEE. PART II WILL BE HEARD BY THE IRC-BUILDING CODE COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THESE COMMITTEES.

2021 International Existing Building Code

SECTION 112
MEANS OF APPEALS

[A] 112.1 General. In order to hear and decide appeals of orders, decisions or determinations made by the *code official* relative to the application and interpretation of this code, there shall be and is hereby created a board of appeals. The board of appeals shall be appointed by the applicable governing authority and shall hold office at its pleasure. The board shall adopt rules of procedure for conducting its business and shall render all decisions and findings in writing to the appellant with a duplicate copy to the *code official*.

Revise as follows:

[A] 112.2 Limitations on authority. An application for appeal shall be based on a claim that the true intent of this code or the rules legally adopted thereunder have been incorrectly interpreted, the provisions of this code do not fully apply or an equivalent or better form of construction is proposed. The board shall not have authority to waive requirements of this code ~~or interpret the administration of this code~~.

[A] 112.3 Qualifications. The board of appeals shall consist of members who are qualified by experience and training to pass on matters pertaining to ~~building construction~~ the provisions of this code and are not employees of the jurisdiction.

[A] 112.4 Administration. The *code official* shall take ~~immediate~~ action in accordance with the decision of the board.

Reason: ADM40-19 was approved for IBC, IEBC, IFC, IWUIC, IPC, IMC, IFGC, ISPSC, IPMC, IPSDC, IECC-R and IGCC for revisions to the section on Means of Appeals. This item was disapproved for IECC Commercial and IRC. The result is an inconsistency with IECC Commercial and IRC.

The intent of this proposal is coordination for the means of appeals within the family of codes. Most of this was accomplished through ADM40-19 during the last cycle. Comments during the testimony, from the code development committees and subsequent discussions have suggested some improvements.

General: In the IRC and IECC Residential, the sentence about the code official not being a voting member of the board of appeals is proposed to be deleted. The fact about city employees not being a voting member of the board is already included in the section on qualifications. The code official is an important advisor for the Board of Appeals. The deletion of this sentence will not change that.

Limitation on authority. The deletion of 'or interpret the administration of this code' is proposed to be deleted so that the board could consider appeals on any part of the codes.

Qualifications: The phrase for experience and training is slightly different in each code. Adding this idea to all codes would provide consistency.

Administration: The IRC code change committee felt that 'immediate' was unreasonable. With the word removed, the board, or jurisdiction can set a reasonable timeframe.

This proposal is submitted by the ICC Building Code Action Committee (BCAC), ICC Fire Code Action Committee (FCAC) and . ICC Plumbing/Mechanical/Gas Code Action Committee (PMGCAC).

BCAC was established by the ICC Board of Directors in July 2011 to pursue opportunities to improve and enhance assigned International Codes or portions thereof. In 2020 and 2021 the BCAC has held several virtual meetings open to any interested party. In addition, there were numerous virtual Working Group meetings for the current code development cycle, which included members of the committee as well as interested parties. Related documents and reports are posted on the BCAC website at https://www.iccsafe.org/products-and-services/i-codes/code-development/cs/building-code-action-committee-bcac/.

The FCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance assigned International Codes with regard to fire and life safety in new and existing buildings and facilities as well as the protection of life and property in wildland urban interface areas. In 2020 and 2021 the Fire-CAC held multiple virtual meetings that were open to any interested party. In addition, there were numerous virtual specific working group meetings that were also open to any interested parties, to develop, discuss and debate the proposed changes. Related documentation and reports are posted on the FCAC website at: https://www.iccsafe.org/products-and-services/i-codes/code-development/cs/fire-code-action-committee-fcac/

The PMG CAC was established by the ICC Board of Directors in July 2011 to pursue opportunities to improve and enhance assigned International Codes or portions thereof. In 2020 and 2021, the PMGCAC has held several virtual meetings open to any interested party. Numerous interested parties attended the committee meetings and offered their input.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
These are administration requirements, so there will be no change in construction requirements.

Public Hearing Results

Committee Action **As Submitted**

Committee Reason: The committee stated that the reason for approval was the proponent's reason statement which includes coordination of the codes. It was specifically noted that most jurisdictions have a single board of appeals that covers all the codes in that jurisdiction, so it is important to only have one set of requirements that is consistent within each code. (Vote: 13-0)

Public Comments

Public Comment 1

Proponents: Robert Frances, Howard County (MD) Dept. of Inspections, Licenses, & Permits, Self (bfrances@howardcountymd.gov) requests As Modified by Public Comment

Modify as follows:

2021 International Building Code

[A] 113.3 Qualifications. The board of appeals shall consist of members who are qualified by experience and training on matters pertaining to <u>the</u> provisions of this code and are not employees of the jurisdiction.

2021 International Existing Building Code

[A] 112.3 Qualifications. The board of appeals shall consist of members who are qualified by experience and training~~to pass~~ on matters pertaining to the provisions of this code and are not employees of the jurisdiction.

Commenter's Reason: These are two minor editorial corrections to add the word "the" to Section 113.3 of the IBC, and striking out the words "to pass" from Section 112.3 of the IEBC.

Cost Impact: The net effect of the Public Comment and code change proposal will not increase or decrease the cost of construction This will have no cost impact on what has already been passed; it is editorial in nature only.

Public Comment 2

Proponents: Mike Nugent, Chair, Building Code Action Committee (bcac@iccsafe.org) requests As Modified by Public Comment

Modify as follows:

2021 International Building Code

[A] 113.4 Administration . The *building official* shall take action without delay in accordance with the decision of the board.

2021 International Existing Building Code

[A] 112.4 Administration. The *code official* shall take actionwithout delay in accordance with the decision of the board.

2021 International Fire Code

[A] 111.4 Administration. The *fire code official* shall take actionwithout delay in accordance with the decision of the board.

2021 International Fuel Gas Code

113.4 Administration. The *code official* shall take actionwithout delay in accordance with the decision of the board.

2021 International Mechanical Code

[A] 114.4 Administration. The code official shall take action without delay in accordance with the decision of the board.

2021 International Plumbing Code

[A] 114.4 Administration. The code official shall take action without delay in accordance with the decision of the board.

2021 International Property Maintenance Code

107.4 Administration. The *code official* shall take actionwithout delay in accordance with the decision of the board.

2021 International Private Sewage Disposal Code

[A] 112.4 Administration. The *code official* shall take actionwithout delay in accordance with the decision of the board.

2021 International Swimming Pool and Spa Code

[A] 111.4 Administration. The *code official* shall take actionwithout delay in accordance with the decision of the board.

2021 International Wildland-Urban Interface Code

[A] 113.4 Administration. The *code official* shall take actionwithout delay in accordance with the decision of the board.

2021 International Green Construction Code

111.4 Administration. The authority having jurisdiction shall take action without delay in accordance with the decision of the board.

Commenter's Reason: Last cycle the Administrative Committee asked the BCAC to remove the word 'immediate' as it could be read to require the code official to respond immediately after the board made it's decision - as in that night immediately following the conclusion of the meeting. This proposal did that. However, after the spring hearings, BCAC received comments that no timeline could be read the opposite - in that a code official could delay indefinately. It is hope that 'without delay' is a reasonable compromise.

Cost Impact: The net effect of the Public Comment and code change proposal will not increase or decrease the cost of construction
This is an editorial correction with no changes to construction requirements.

Final Hearing Results

ADM48-22 Part I AMPC1,2

ADM49-22

Original Proposal

IEBC: SECTION 117, [A] 117.1; IPMC: SECTION 113, 113.1

Proponents: Mike Nugent, Chair, Building Code Action Committee (bcac@iccsafe.org)

2021 International Existing Building Code

SECTION 117
DEMOLITION

Revise as follows:

[A] 117.1 General. ~~The *code official* shall order the owner or owner's authorized agent of any premises on which is located any structure that in the *code official's* judgment is so old or dilapidated, or has become so out of*repair* as to be *dangerous*, *unsafe*, insanitary or otherwise unfit for human habitation of occupancy, and such that it is unreasonable to *repair* the structure, to demolish and remove such structure; or if such structure is capable of being made safe by *repairs*, to *repair* and make safe and sanitary or to demolish and remove to the owner's or the owner's authorized agent's option; or where there has been a cessation of normal construction of any structure for a period of more than two years, to demolish and remove such structure.~~

When the code official determines any structure is so old, dilapidated or has become so out of repair and is dangerous, unsafe, insanitary and otherwise unfit for human habitation or occupancy the code official can order either of the following:

1. The code official is permitted to authorize the owner or owner's authorized agent to make the structure safe by repairs in order to make the structure safe and sanitary. Where there has been a cessation of construction repairs of any structure for a period of more than two years the structure will be ordered demolished and removed.
2. The code official is permitted to order the owner or owner's authorized agent to demolish and remove any such structure.

Reason: This is a run on sentence. The intent is only to clarify.

This proposal was submitted by the Building Code Action Committee (BCAC). BCAC was established by the ICC Board of Directors in July 2011 to pursue opportunities to improve and enhance assigned International Codes or portions thereof. In 2020 and 2021 the BCAC has held several virtual meetings open to any interested party. In addition, there were numerous virtual Working Group meetings for the current code development cycle, which included members of the committee as well as interested parties. Related documents and reports are posted on the BCAC website at https://www.iccsafe.org/products-and-services/i-codes/code-development/cs/building-code-action-committee-bcac/.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
This proposal is editorial.

Public Hearing Results

Committee Action **As Submitted**

Committee Reason: The committee stated that the reason for approval is that it is good clarification and reorganization of the code. (Vote: 13-0)

Final Hearing Results

ADM49-22 AS

G1-22 Part I

Original Proposal

PART I - IBC: SECTION 202; IFC: SECTION 202; IEBC: SECTION 202 (New)

PART 2: IRC: SECTION 202

Proponents: Tim Earl, GBH International, The Gypsum Association (tearl@gbhinternational.com)

THIS IS A TWO PART CODE CHANGE. PART 1 WILL BE HEARD BY THE INTERNATIONAL BUILDING CODE-STRUCTURAL COMMITTEE, PART 2 WILL BE HEARD BY THE INTERNATIONAL RESIDENTIAL CODE BUILDING COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THESE COMMITTEES.

2021 International Existing Building Code

Add new definition as follows:

GYPSUM BOARD. A type of gypsum panel product consisting of a noncombustible core primarily of gypsum with paper surfacing.

GYPSUM PANEL PRODUCT. The general name for a family of sheet products consisting essentially of gypsum complying with the standards specified in Table 2506.2 and Table 2507.2, and Chapter 35 of the International Building Code.

GYPSUM SHEATHING. Gypsum panel products specifically manufactured with enhanced water resistance for use as a substrate for exterior surface materials.

GYPSUM WALLBOARD. A gypsum board used primarily as an interior surfacing for building structures.

Reason: This clarifies the term already used in the code and more closely harmonizes the terms and definitions to what is being used by ASTM and the industry than what currently exists.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
This simply clarifies the terms and harmonizes to what is being used by ASTM and the industry.

Public Hearing Results

Committee Action **As Submitted**

THIS CODE CHANGE WAS HEARD BY THE IBC-STRUCTURAL COMMITTEE.

Committee Reason: Approved as submitted consistent with actions on G1-22 Part II. (Vote: 14-0)

Final Hearing Results

G1-22 Part I AS

G9-22

Original Proposal

IBC: 3301.2, 3302.2, 3303.5, SECTION 3307, [BS] 3307.1; IEBC: [BG] 1501.2, [BG] 1501.4, SECTION 1502, [BS] 1502.1

Proponents: Justin M. Spivey, Wiss, Janney, Elstner Associates, Inc., Self (jspivey@wje.com)

THIS CODE CHANGE WILL BE HEARD BY THE INTERNATIONAL BUILDING CODE-STRUCTURAL COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THIS COMMITTEES.

2021 International Existing Building Code

Revise as follows:

[BG] 1501.2 Storage and placement. Construction equipment and materials shall be stored and placed so as not to endanger the public, the workers or ~~adjoining~~adjacent property for the duration of the construction project.

[BG] 1501.4 Manner of removal. Waste materials shall be removed in a manner that prevents injury or damage to persons,~~adjoining~~ adjacent properties and public rights-of-way.

SECTION 1502
PROTECTION OF ~~ADJOINING~~ADJACENT PROPERTY

[BS] 1502.1 Protection required. ~~Adjoining~~Adjacent public and private property shall be protected from damage during construction and demolition work. Protection must be provided for footings, foundations, party walls, chimneys, skylights and roofs. Provisions shall be made to control water runoff and erosion during construction or demolition activities. The person making or causing an excavation to be made shall provide written notice to the owners of ~~adjoining~~adjacent buildings advising them that the excavation is to be made and that the ~~adjoining~~adjacent buildings should be protected. Said notification shall be delivered not less than 10 days prior to the scheduled starting date of the excavation.

Reason: A distinction is needed between adjacent (Webster: close or near) and adjoining (Webster: touching or bounding at a point or line); adjoining is the more restrictive term as it requires contact. Especially in urban environments, *buildings* or non-building *structures* may separated by a public alley or otherwise close enough that demolition, excavation, or construction activities for one *building* or non-building *structure* may affect another without direct contact, i.e., adjacent but not adjoining. This and other related proposals being submitted in this cycle do not seek to address the numerous instances where adjacent and adjoining appear to be used interchangeably—most frequently in IBC Chapters 4, 7, 9, 10, and 23; instead, they seek to resolve inconsistent usage of adjacent and adjoining as a modifier of the words property, *structure*, *building*, and footing in IBC Chapters 18 and 33 and Appendix J and in IEBC Chapter 15.

Cost Impact: The code change proposal will increase the cost of construction
This proposal does not change the spirit of the provision, but changes the letter slightly. There is a chance the revised wording will curtail questionable or creative interpretations and thus increase initial cost, but to the extent it encourages proper protection of adjacent property, it will lower the risk of damage, reduce or eliminate the cost of repairs and/or litigation, and thereby decrease total cost.

Public Hearing Results

Committee Action **As Submitted**

THIS CODE CHANGE WAS HEARD BY THE IBC-STRUCTURAL COMMITTEE.

Committee Reason: Approved as submitted as the proposal adds consistency with the the scoping statement. The committee did express concerns on the interpretation of 'how far does adjacent extend'. The committee felt a clarification or definition could assist. (Vote: 9-5)

Final Hearing Results	
G9-22	AS

G11-22

Original Proposal

IBC: [BS] 3307.1, [BS] 3307.2, [BS] 3307.2.2; IEBC: [BS] 1502.1, [BS] 1502.2, [BS] 1502.2.2

Proponents: Justin M. Spivey, Wiss, Janney, Elstner Associates, Inc., Self (jspivey@wje.com)

THIS CODE CHANGE WILL BE HEARD BY THE INTERNATIONAL BUILDING CODE-STRUCTURAL COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THIS COMMITTEES.

2021 International Existing Building Code

Revise as follows:

[BS] 1502.1 Protection required. Adjoining public and private property shall be protected from damage during construction and demolition work. Protection must be provided for footings, foundations, party walls, chimneys, skylights and roofs. Provisions shall be made to control water runoff and erosion during construction or demolition activities. The person making or causing an excavation to be made shall provide written notice to the owners of adjoining ~~buildings~~property advising them that the excavation is to be made and that the adjoining~~buildings~~ property should be protected. Said notification shall be delivered not less than 10 days prior to the scheduled starting date of the excavation.

[BS] 1502.2 Excavation retention systems. Where a retention system is used to provide support of an excavation for protection of adjacent property or structures, the system shall conform to the requirements in Section 1502.2.1 through 1502.2.3.

[BS] 1502.2.2 Excavation retention system monitoring. The retention system design shall include requirements for monitoring of the system and adjacent property or structures for horizontal and vertical movement.

Reason: This proposal seeks to resolve inconsistent use of property,*structure*, and *building* in IBC Section 3307 and similar IEBC Section 1502. Property is not defined in Chapter 2 but assumed to indicate a parcel of real property (land) on which one or more *structures* might be located, and some or all of those *structures* might be *buildings* (per IBC and IEBC Chapter 2, *buildings* are *structures* "utilized or intended for supporting or sheltering any occupancy"). Given that property is the least restrictive term, and encompasses both *buildings* and non-building *structures* along with the parcel of land they occupy, the term property should be used throughout to improve consistency among subsections. IBC Section 3307 and IEBC Section 1502 already cover adjacent property; this proposal just makes all of these provisions consistent.

Cost Impact: The code change proposal will increase the cost of construction
This proposal resolves inconsistent use of terminology and is editorial only. Although there is a small chance that the revised wording would cause additional protective measures to be implemented and thus increase initial cost, the protective measures would presumably be designed to substantially limit or preclude damage to adjacent property, reducing or eliminating the cost of repairs and/or litigation, and thereby decreasing total cost.

Public Hearing Results

Committee Action **As Submitted**

THIS CODE CHANGE WAS HEARD BY THE IBC-STRUCTURAL COMMITTEE.

Committee Reason: Approved as submitted as the proposed language clarifies the intent of the code and provides protection of property. The committee did express concerns that generally the intent of the code is to protect adjoining buildings not adjoining landscaping. (Vote:

9-5)

Final Hearing Results

G11-22 AS

G199-21 Part I

Original Proposal

PART I - IBC: 3301.1, 3301.2, [BS] 3301.2.1, SECTION 3302, 3302.1, 3302.1.1 (New), 3302.2, 3302.3, 3302.3.1 (New); IEBC: 1501.1, 1501.2, 1501.2.1, [BS] 1501.3, 1501.4, 1501.5, 1501.7, SECTION 1502(New), 1502.1(New), 1502.1.1(New), 1502.2(New), 1502.3(New), 1502.3.1(New), SECTION 1503(New), SECTION 1504(New)
PART II - IFC: 3303.1.1, 3303.3

Proponents: Jeffrey Shapiro, International Code Consultants, Self (jeff.shapiro@intlcodeconsultants.com)

THIS IS A 2 PART CODE CHANGE. PART I WILL BE HEARD BY THE GENERAL CODE COMMITTEE. PART II WILL BE HEARD BY THE FIRE CODE COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THESE COMMITTEES.

2021 International Existing Building Code

SECTION 1501
GENERAL

Revise as follows:

[BG] 1501.1 Scope. The provisions of this chapter shall govern safety during construction and the protection of adjacent public and private properties. Fire safety during construction shall also comply with the applicable provisions of Chapter 33 of the International Fire Code

[BG] 1501.2 Storage and placement of construction equipment and materials. Construction equipment and materials shall be stored and placed so as not to endanger the public, the workers or adjoining property for the duration of the construction project.

[BS] ~~1501.2.1~~ 1501.3 ~~Structural and construction~~ Roof loads. Structural roof components shall be capable of supporting the roof-covering system and the material and equipment loads that will be encountered during installation of the system.

[BG] ~~1501.3~~ 1501.4 ~~Alterations, repairs and additions~~ Maintenance of exit s, existing structural elements, fire protection devices and sanitary safeguards. Required exits, existing structural elements, fire protection devices and sanitary safeguards shall be maintained at all times during *alterations*, *repairs* or *additions* to any building or structure.

Exceptions:

1. Where such required elements or devices are being altered or repaired, adequate substitute provisions shall be made.
2. Maintenance of such elements and devices is not required where the *existing building* is not occupied.

[BG] ~~1501.4~~ 1501.5 Removal of waste materials ~~Manner of removal~~. Waste materials shall be removed in a manner that prevents injury or damage to persons, adjoining properties and public rights-of-way.

Delete without substitution:

~~**[BG] 1501.5 Fire safety during construction.** Fire safety during construction shall comply with the applicable requirements of the *International Building Code* and the applicable provisions of Chapter 33 of the International Fire Code.~~

Add new text as follows:

SECTION 1502
OWNER'S RESPONSIBILITY FOR FIRE PROTECTION

1502.1 Site Saf et y Plan. The owner or owner's authorized agent shall be responsible for the development, implementation and maintenance of an approved, written site safety plan establishing a fire prevention program at the project site applicable throughout all phases of the construction, repair, alteration or demolition work. The plan shall be submitted and approved before a building permit is issued, Any changes to the plan shall address the requirements of this chapter and other applicable portions of the International Fire Code, the duties of staff, and staff training requirements. The plan shall be submitted for approval in accordance with the International Fire Code.

1502.1.1 Components of site safety plans. Site safety plans shall include the following as applicable:

1. Name and contact information of site safety director.
2. Documentation of the training of the site safety director and fire watch personnel.
3. Procedures for reporting emergencies.
4. Fire department vehicle access routes.
5. Location of fire protection equipment, including portable fire extinguishers, standpipes, fire department connections and fire hydrants.
6. Smoking and cooking policies, designated areas to be used where approved, and signage locations in accordance with the International Fire Code.
7. Location and safety considerations for temporary heating equipment.
8. Hot work permit plan.
9. Plans for control of combustible waste material.
10. Locations and methods for storage and use of flammable and combustible liquids and other hazardous materials.
11. Provisions for site security and, where required, for a fire watch.
12. Changes that affect this plan.
13. Other site-specific information required by the International Fire Code.

1502.2 Site safety director. The owner shall designate a person to be the site safety director. The site safety director shall be responsible for ensuring compliance with the site safety plan. The site safety director shall have the authority to enforce the provisions of this chapter and other provisions as necessary to secure the intent of this chapter. Where guard service is provided in accordance with the International Fire Code, the site safety director shall be responsible for the guard service.

1502.3 Daily fire safety inspect ion. The site safety director shall be responsible for completion of a daily fire safety inspection at the project site. Each day, all building and outdoor areas shall be inspected to ensure compliance with the inspection list in this section. The results of each inspection shall be documented and maintained on-site until a certificate of occupancy has been issued. Documentation shall be immediately available on-site inspection and review.

1. Any contractors entering the site to perform hot work each day have been instructed in the hot work safety requirements in the International Fire Code, and hot work is performed only in areas approved by the site safety director.
2. Temporary heating equipment is maintained away from combustible materials in accordance with the equipment manufacturer's instructions.
3. Combustible debris, rubbish and waste material is removed from the building in areas where work is not being performed.
4. Temporary wiring does not have exposed conductors.
5. Flammable liquids and other hazardous materials are stored in locations that have been approved by the site safety director when not involved in work that is being performed.
6. Fire apparatus access roads required by the International Fire Code are maintained clear of obstructions that reduce the width of the usable roadway to less than 20 feet (6096 mm).
7. Fire hydrants are clearly visible from access roads and are not obstructed.

8. The location of fire department connections to standpipe and in-service sprinkler systems are clearly identifiable from the access road and such connections are not obstructed.

9. Standpipe systems are in service and continuous to the highest work floor, as specified in Section 1506.

10. Portable fire extinguishers are available in locations required by Sections 1504 and for roofing operations in accordance with the International Fire Code.

11. Where a fire watch is required, fire watch records complying with the International Fire Code are up-to-date.

1502.3.1 Violations. Failure to properly conduct, document and maintain documentation required by this section shall constitute an unlawful act in accordance with Section 114.1 and shall result in the issuance of a notice of violation to the site safety director in accordance with Section 114.2. Upon the third offense, the Building Official is authorized to issue a stop work order in accordance with Section 115, and work shall not resume until satisfactory assurances of future compliance have been presented to and approved by the Building Official.

SECTION 1503
SANITARY

Revise as follows:

[BG] ~~1501.7~~ 1503.1 Facilities required. Sanitary facilities shall be provided during construction or demolition activities in accordance with the *International Plumbing Code* .

Add new text as follows:

SECTION 1504 PROTECTION OF PEDESTRIANS. *(Renumber 1501.6 through 1501.6.7 as 1504 subsections)*

Reason: Correlation with IFC for provisions for construction site safety that a building inspector can reasonably verify and enforce while onsite doing other scheduled inspections. Clearly, building inspectors are plenty busy with scheduled inspections, and we are not looking to bog them down with additional work touring the site for safety violations. But, having them verify that required owner/manager site safety inspections are being documented is a minimal step to improving construction site safety. Also, IFC reference is moved to the scope for improved visibility and provisions have been added to clarify that a fire watch, where required, and associated records should be part of the safety play and records inspection.
It is recommended that the new section be scoped to the Fire Code for maintenance.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
Provisions being modified in the IBC are already in the IFC. Changes are for clarity and coordination between the codes.

Public Hearing Results

Committee Action **As Submitted**

Committee Reason: The proposal was approved as submitted as the proposal is a good coordinated change and providing a link to the Chapter 33 of the International Fire Code in the scoping statement of Section 3301.1. (Vote: 12-2)

Final Hearing Results

S58-22 Part I

Original Proposal

IBC: [A] 110.3.6, 1512.3; IEBC: [A] 109.3.5, [BS] 705.3

Proponents: Tim Earl, GBH International, the Gypsum Association (tearl@gbhint.com)

THIS IS A 2 PART CODE CHANGE. PART I WILL BE HEARD BY THE IBC STRUCTURAL CODE COMMITTEE. PART II WILL BE HEARD BY THE IRC-B CODE COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THESE COMMITTEES.

2021 International Existing Building Code

Revise as follows:

[A] 109.3.5 Lath or gypsum ~~board~~panel product inspection. Lath and gypsum ~~board~~panel inspections shall be made after lathing and gypsum ~~board~~ panel products, interior and exterior, is in place but before any plastering is applied or before gypsum~~board~~ panel product joints and fasteners are taped and finished.

Exception: Gypsum ~~board~~panels that ~~is~~ are not part of a fire-resistance-rated assembly or a shear assembly.

[BS] 705.3 Roof recovering. Where the application of a new roof covering over wood shingle or shake roofs creates a combustible concealed space, the entire existing surface shall be covered with gypsum ~~board~~panel products, mineral fiber, glass fiber or other*approved* materials securely fastened in place.

Reason: Gypsum board is a type of gypsum panel product. These two sections erroneously use the term board instead of panel. Exterior products are often glass mat, which are panels but not boards, so panel is the appropriate term here.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
Simple editorial cleanup with no impact on cost.

Public Hearing Results

Committee Action **As Submitted**

Committee Reason: Approved as submitted as per the provided reason statement. (Vote: 14-0)

Final Hearing Results

S58-22 Part I AS

S125-22 Part II

Original Proposal

IEBC: [A] 109.3.10

Proponents: Gregory Wilson, Federal Emergency Management Agency, FEMA (gregory.wilson2@fema.dhs.gov); Rebecca Quinn, RCQuinn Consulting, Inc., DHS Federal Emergency Management Agency (rcquinn@earthlink.net)

2021 International Existing Building Code

Revise as follows:

[A] 109.3.10 Flood hazard documentation. Where a building is located in a *flood hazard area*, documentation of the elevation of the lowest floor or the elevation of dry floodproofing, if applicable, as required in the International Building Code or the International Residential Code, as applicable, shall be submitted to the *code official* prior to the final inspection.

Reason: When nonresidential buildings in flood hazard areas are proposed to be dry floodproofed, several aspects of design are critical, including the strength of walls and flood shields that are designed to be watertight (addressed in 1612.4 #1.3) and the required elevation of the dry floodproofing, which is specified in ASCE 24 Chapter 6.
The proposed change follows the pattern already established for documentation of lowest floor elevations prior to the final inspection. Because dry floodproofed buildings do not have elevated “lowest floors,” rather than survey floors, this change clarifies the elevation to which dry floodproofed buildings are protected is to be documented. Having this elevation determined and documented helps local officials confirm compliance with the design requirements. The NFIP regulations require communities to obtain the elevation to which structures are floodproofed [44 Code of Federal Regulations Sec. 60.3(b)(5)(ii)].

FEMA’s Mitigation Assessment Team reports prepared after some significant flood events document failures of dry floodproofing systems. Some failures are caused by floodwater rising higher than the protective measures, which indicates the value of documenting that construction of those measures does meet the requirements for compliance.

Many communities require permittees to use the FEMA Floodproofing Certificate for Non-Residential Structures (FEMA Form 086-0-34). That form is prepared for use to certify designs as part of documentation submitted with permit applications, as well as for use to certify the “floodproofed elevation.” The form also is used when certification of as-built conditions is required, including the elevation to which the building is dry floodproofed. The FEMA National Flood Insurance Program requires as-built certification as part of qualifying for NFIP flood insurance policy coverage for dry floodproofed nonresidential buildings.

Bibliography: FEMA Form 086-0-34, FEMA Floodproofing Certificate for Non-Residential Structures:https://www.fema.gov/media-library/assets/documents/2748

Cost Impact: The code change proposal will not increase or decrease the cost of construction
The code change proposal clarifies that the elevation to which dry floodproofed buildings are protected is to be documented, rather than documentation of the “lowest floors.” There is no change in cost because the cost to survey the elevation to which a building is dry floodproofed would be equal to the cost to survey a floor elevation relative to datum. Completion of the survey portion of the FEMA Nonresidential Floodproofing Certificate requires fewer inputs by the professional certifying the survey than are required to complete a FEMA Elevation Certificate.

Public Hearing Results

Committee Action **As Submitted**

THIS CODE CHANGE WAS HEARD BY THE ADMINISTRATIVE COMMITTEE.

Committee Reason: The committee stated that the reason for approval was that this language is absolutely needed in dry floodproofing cases where buildings are elevated to get this certification. (Vote: 13-0)

Final Hearing Results

S125-22 Part II	AS